CITY OF LYNWOOD, CALIFORNIA
Request for Proposal
Consulting Services for Site Remediation
Project

RFP Due Date: Thursday, April 15, 2010, 11:00 A.M.

City of Lynwood Redevelopment Agency
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March 25, 2010

Request for Proposal, Consulting Services for Site Remediation of 11600 Long Beach Blvd.

I. Overview

Pursuant to City procurement procedures, the City of Lynwood seeks proposals for Consulting Services for Site Remediation of 11600 Long Beach Blvd. et. seq., Lynwood, California from qualified and experienced firms. The general project will include a potential grocery store, transit oriented development, and retail. A potential site plan is attached hereto as Attachment A.

II. General Information

In 2008, the City of Lynwood was a recipient of a Brownfields Assessment Grant under the EPA's Brownfields Assessment Grant Program. The City used this money to assess key Brownfields sites located throughout Lynwood and at 11600 Long Beach Blvd. and nearby addresses. The City of Lynwood is focusing on reviving the City's downtown area, in which Long Beach Boulevard will be the focal point. Consistent with the recently developed Long Beach Boulevard Specific Plan (December 2006), the City's goal is to recreate an approximately 140-acre downtown area through a series of redevelopment projects designed to encourage traditional commercial retail and mixed-use projects that will contain design features to encourage pedestrian activity and encourage a live-work community. At the center of the Project Area, at the I-105/Long Beach Boulevard interchange, is a significantly underutilized Park and Ride associated with the Metro Green Line light rail and the Rocket Fuel service station and surrounding redevelopment area identified as Southeast 105 Freeway and Long Beach. The Park and Ride is surrounded by blighted properties and is the ideal location for a Transit Oriented Development (TOD). Collectively, the area is identified as the Long Beach Boulevard Transit Village.

Due to the City's regulatory timeline and proposed remedial schedule, other regulatory deliverables are required by the RWQCB. Additional site information may be requested in electronic format; however, due to the amount of data, Proposers will have to make arrangements for the acquisition of the data. If there are questions, Proposers may submit written questions which will become public for all potential Proposers. Oral inquiries will not be answered.

III. Historical Description of Release and Threat to Human Health

A. *5.1 Description of Release*

The following section describes the status of site investigations and remedial actions to best of the Agency's knowledge, as presented in the report entitled Conceptual Site Model Update, June 15, 2007, prepared by Brown and Caldwell for the responsible party. Detailed site information is available at offices of the Los Angeles Regional Water Quality Control Board (LARWQCB). Further information is also provided in the Interim Remedial Action Plan (IRAP) and the Interim Remedial Action Design Report (Design Report) both attached hereto.

1930's through 1960. Historical city directory listings reveal the presence of additional gasoline service stations on the U-Haul property during the 1930s and 1940s [in the vicinity of the project area]. The potential that these former service stations contributed to non-MTBE soil and/or groundwater contaminant plumes beneath the Project Area cannot be ruled out at this time. In a letter to the LARWQCB dated June 16, 2006, Brown and Caldwell asked the LARWQCB to request additional information on historical operations for the Texaco Service station believed to have been located on the U-Haul property at 11730 Long Beach Boulevard during the time period from approximately 1940 to 1960. On September 5, 2006, the LARWQCB requested additional information from Texaco regarding the historical operation of the service station at the southeast corner of Long Beach Boulevard and Josephine Street (LARWQCB, 2006c). As of the time of writing of this report, a response from Texaco, to the best of our knowledge, has not been received.

1951 through 1959. Unocal operated a gasoline service station at the southeast corner of Louise Avenue and Long Beach Boulevard. (Jones Environmental, 2002; Brown and Caldwell 2006a). The LARWQCB submitted a letter to Chevron Texaco (formerly Union Oil Company of California) requesting additional information regarding the Site history and possible contributor to the contamination found beneath the Site (LARWQCB 2006c).

1965. Westway Petroleum opens the first gasoline service station at the Site in the location of the current US Royal, Inc. service station.

1976. U-Haul reported the installation of a single gasoline/diesel underground storage tank (UST) in the west-central portion of the U-Haul property used to fuel company vehicles. The UST reportedly consisted of a 10,000-gallon single-walled fiberglass UST. Figure 2 presents the approximate location of these tanks and associated pump island.

1979. U-Haul reported the installation of a waste oil UST on their property in the northwestern corner of the U-Haul property. The UST was used to store waste oil generated from vehicle maintenance operations. This tank is a 550-gallon, single-walled steel tank. Figure 2 presents the approximate location of the UST.

1986. U-Haul installs three soil borings (B01 through B03), two in the vicinity of the 10,000-gallon UST to the west of the warehouse building and one near the 550-gallon waste oil UST located immediately north of the warehouse building. The borings were completed to a depth of approximately 41 feet below ground surface (bgs), and groundwater was encountered at approximately 30 feet bgs. The borings were converted to groundwater monitoring wells and subsequently re-labeled EX-1 through EX-3 in later reports. Soil samples from borings -01 and -02 (completed adjacent to the gasoline UST), and soil samples from boring -03 near the waste oil tank were composited. The soil samples analyzed reportedly did not contain detectable concentrations of petroleum hydrocarbons.

1994. The Los Angeles County Department of Public Works (LADPW) issued a Notice of Non-Compliance to U-Haul on July 13, 1994 stating that analytical results of groundwater samples from the monitoring wells installed in 1986 had not been submitted to LADPW, as was required by a January 13, 1989 letter. The letter stated a response was to be submitted to the LADPW office by September 13, 1994. No additional correspondence has been located.

1995. At the Site, operating at the time under the name Garfield Express, one UST failed its tightness test. The leaking UST was removed from service at the time of the leak discovery. LNAPL and dissolved-phase gasoline constituents were detected in groundwater during subsequent investigative activities.

1996. U-Haul removed the 10,000-gallon gasoline/diesel UST and waste oil UST, gasoline dispenser and associated piping (Blaes Environmental 1997). The waste oil UST had 10 holes each approximately 1/8 inch in diameter. Seven soil samples were collected at the time of UST removal: two samples from the beneath the former gasoline UST at a depth of 14 feet bgs, one from below the former waste oil UST at seven feet bgs, one from below the former product and vent piping, and two from the excavated soil stockpiles. Results of the laboratory analyses indicated that total petroleum hydrocarbons as gasoline (TPH-g), benzene, toluene, ethylbenzene and xylenes (BTEX) and MTBE were present in the samples. Based on available data, it appears that the waste oil UST release(s) in the vicinity of the former maintenance shop have not been adequately investigated with respect to heavy metals and other potential non-petroleum constituents typically found in waste oils from automotive servicing operations.

1997 through June 2001. J & B Environmental installed thirty-five, 4-inch diameter groundwater monitoring wells (MW-1 through MW-35) on behalf of the Trust in the Project Area in an effort to delineate the lateral extent of the petroleum hydrocarbon release.

1998. Groundwater monitoring and reporting events were initiated by J & B Environmental under contract to the Trust.

1999. The former UST system, at the Site was removed and replaced with an upgraded UST system. US Royal, Inc. began operating at the Site in 1999 under the name USA Royal Oil.

1999. An initial LNAPL recovery system consisting of a skimmer system was connected to wells MW-2, MW-3 and MW-5 by J & B Environmental.

1999 through 2000. Ten vapor extraction wells were installed. The LNAPL recovery system initiated in 1999 was shut down in 2000 at the direction of the LARWQCB (Haslett, 2001), and hand bailing commenced at that time as an interim measure, pending the installation of a more robust remediation system.

2001. Cornerstone Technologies, Inc conducts a Phase 1 Investigation on behalf of the City of Lynwood for the Project Area (Cornerstone Technologies 2001).

2001. Preliminary Site Conceptual Model (SCM) for the Site is prepared by James M. Haslett, Registered Geologist on behalf of the Trust. A synopsis of the history of assessment and remedial work at the Site was presented.

2001. Blaes Environmental, under contract to U-Haul, conducts an additional subsurface investigation at the U-Haul site that includes drilling and sampling of eight additional soil borings in the areas of the former gasoline UST, waste oil UST, product piping and dispenser areas, and conversion of three of the soil borings into additional groundwater monitoring wells (UH-1, UH-2 and UH-3, Figure 2). Laboratory analysis identified TPH-g, BTEX and MTBE in soil samples. Groundwater samples collected in existing wells EX-1 through EX-3 measured LNAPL ranging from 6.76 feet to 8.96 feet.

2006. Since the June semi-annual groundwater monitoring event both the Trust and U-Haul have coordinated sampling efforts and a comprehensive well survey in order to: 1) tie the wells in the vicinity of the Project Area into a common benchmark and 2) verify well casing elevations and the corresponding groundwater gradient. Since June 2006, Brown and Caldwell and U-Haul have been coordinating the groundwater monitoring activities.

2006. The Trust submitted a report to the LARWQCB presenting data to support subsequent releases of gasoline and diesel since the last reported release. The June 2006 SCM Update (Brown and Caldwell 2006c) and December groundwater monitoring event (reported herein in Section 9) present data that diesel range hydrocarbons have been identified in the groundwater. In addition, while investigating these potential new releases a diesel line was damaged and resulted in a release of diesel. The damaged line was repaired and documented.

2006. The Trust has also requested the LARWQCB to request additional information from Texaco and Union Oil regarding the historical operations of service stations that operated within the Project Area. As part of a larger subsurface investigation to investigate the U-Haul property as a potential source of dissolved and LNAPL contamination beneath the Project Area, one soil and four Rapid Optical Screening Technique (ROST) borings were completed by Brown and Caldwell and Blaes Environmental in the southern portion of the U-Haul property in November 2006 (Section 8) to further investigate the area of the former Texaco station. Results confirm the presence of petroleum hydrocarbons, possibly in the kerosene range, in soil beneath the former service station (ROST boring R-36). The lateral and vertical extent of subsurface impacts in this portion of the U-Haul property has not been delineated.

2008. The litigation between U-Haul and the Ross Trust was concluded. A review of the Court record may be warranted in determining the appropriate course of action. It is expected that the U-Haul trust will permit the siting of remediation equipment on U-Haul property; however, this is not confirmed at this date.

2009. Interim remedial action plan was approved by
Regional Water Quality Control Board.

2010. Additional data gap investigation regarding
chlorinated solvents and the residential areas to be conducted in April 2010.

B. *5.2 Threat to Human Health*

A human health risk assessment was completed in 2003 by SOMA which indicates that, without correction, there is an excess cancer risk to current and future occupants at the Site under a commercial land use scenario. The cancer risk was calculated to be 1 E-03, which exceeds the EPA acceptable cancer risk. Furthermore, the risk assessment was calculated based on existing data, which excludes the area beneath the existing residential neighborhood. Current maps of the gasoline contamination plumes and chlorinated VOC plumes in soil vapor and groundwater suggest that the residential neighborhood may be affected by site contaminants. Furthermore, risk guidelines and model characteristics have been updated since 2003 and a new risk assessment is warranted following the collection of additional site-specific data within the residential neighborhood.

The groundwater is affected by both petroleum hydrocarbons and chlorinated VOCs. The vertical extent of chlorinated VOCs have not been totally delineated. The City uses its groundwater for drinking water purposes. While the nearest downgradient drinking water well (State Well #3S/13W-13D01S (Well No. 9), located approximately 4,000 feet to the south-southeast, does not appear to have been affected by the release at this time, remediation of the free product gasoline and elevated concentrations of petroleum hydrocarbons and VOCs is warranted and thus is a subject of this RFP.

IV. Scope of Services

A. *Project Approach*

The Successful Consultant will be a key member of the project team and will work closely with the Brownfields Coordinator and/or other hired Contractor(s). The Successful Consultant will be required to assume sole responsibility for the completed project as required by this RFP. The City of Lynwood will consider the Successful Consultant to be the sole point of contact with regard to contractual matters, whether or not subcontractors are used by the successful consultant for one or more parts of this project. The project description below describes the role of the consultant to be selected through this RFP.

Task 1: Development of Health & Safety Plan and all required Remediation Plans and Specifications

The Successful Consultant will prepare the Health & Safety Plan and any other plans and specifications needed to implement the cleanup of the project area. The selected consultant will interface with Local, State and Federal regulatory agencies as needed to obtain any approvals required for the cleanup of the project area and comply with all laws, regulations, notices or applicable restrictions.

Task 2: Implementation of Site Cleanup

The Successful Consultant will be responsible for implementing all site cleanup activities, and for providing all necessary supervision of cleanup activities. This task includes the installation, testing and operation of remediation equipment; health and safety monitoring; and, confirmatory sampling activities. This task also includes post-excavation sampling and developing site-related State/EPA required cleanup documentation from initiation to completion. Please refer to the attached Interim Remedial Action Plan for more specific information.

Task 3: Public Meetings and Community Involvement.

The selected consultant will be present at one (1) community meeting to educate and update the community regarding cleanup and provide residents the opportunity to learn and comment on the cleanup plan. The City reserves to right to hold additional public meetings if needed.

Task 4: Project Oversight and Reporting

This task includes the preparation of performance and financial reports, meetings with City Officials, project officials from the other entities, RWQCB, environmental consultants and cleanup contractors as needed. The selected consultant will be responsible for meeting project

milestones for performance on time. The Selected Consultant will be responsible for preparing quarterly progress reports documenting the site status, and for submitting these reports to the EPA, if necessary. Deliverables will also include the preparation of a final report documenting that cleanup is complete, or completed to the satisfaction of Regional Water Quality Control Board within the project budget, along with a risk characterization and an activity and use limitation, if necessary. The Successful Consultant must provide invoices and reports that enable the City to perform required reporting and project management. Invoices must be submitted with costs clearly broken out by task.

Time Schedule: Professional services shall be proposed to commence no later than June 21, 2010. The on-site physical cleanup activities described in this RFP shall be completed no later than May 31, 2012. The Proposer agrees to promptly notify the Lynwood Redevelopment Development and the City of Lynwood should problems, delays or adverse conditions become known which will materially affect the ability to attain project objectives or prevent the meeting of time schedules.

Programmatic Conditions

- Federal Policy and Guidelines. The City of Lynwood will rely upon the Successful Consultant to assist it in ensuring compliance with all applicable federal requirements, and in particular, assistance in making eligible Brownfield site determinations.
- Substantial Involvement. EPA and other agencies may be "substantially involved" in overseeing and monitoring the agreement. The Successful Consultant must be willing to allow EPA to review reports and records related to this contract.

Subcontracting will be allowed for tasks required by this RFP. Any intent to subcontract on the part of the Successful Consultant must be specifically described in the proposal. The lack of identification of the subcontracted tasks in the proposal could disqualify the prospective consultant from further consideration. Proposed subcontractors must be listed. The City of Lynwood reserves the right to approve the use of all subcontractors and potential changes of subcontractors, if any.

V. Additional Items

A. The following work remains to be done to remediate the Project Area, and is included in the scope of this RFP:

1. All reporting required by the utilization of the Emergency, Abandoned, and Recalcitrant Fund and State clean up funds will be the responsibility of the Successful Consultant.
2. Successful Consultant will be required to set forth a specific budget and timeline of all relevant items in a remediation effort.
3. An alternate site location for the remediation compound is listed in the RFP. If desired, consultants may submit based upon the alternate site location however timelines for that alternate site location and approvals must be realistic. All other factors, including all advantages and risks of that alternate site may be provided in the response.
4. All responses providing the implementation of a different technology than that set forth in the Design Report will be deemed non-responsive.

VI. Contract Terms & Conditions

A. The contract shall be governed by and construed in accordance with the laws of the State of California. The proposal must comply with all Federal, State, and municipal laws, ordinances, rules and/or regulations and the Successful Consultant will be required to abide by all Local, State, and Federal laws, regulations, notices or other pertinent restrictions.

B. The Successful Consultant will not be permitted to assign or underlet the contract, nor assign either legal or equitably, any monies hereunder, or its claim thereto, without the previous written consent of the City.

C. Verbal orders are not binding on the City and deliveries made or work done without formal Purchase Order or Contract are at the risk of the Seller or Contractor and may result in an unenforceable claim.

D. The Successful Consultant shall be responsible for a good faith effort to comply with Minority and/or Women Owned business enterprise (MWBE) participation goals as set by the EPA. The Successful Consultant shall be responsible for a good faith effort to attempt to hire qualified local contractors and laborers whenever possible, working in conjunction with the City of Lynwood.

E. All proposals must be signed by an authorized officer of the company on all appropriate signature pages. If there is a corporation or LLC or other entity, documentation providing signatory the authority to make offers and bind the entity contractually shall be provided.

F. The Successful Consultant will be required to sign a contract with the City of Lynwood in which he/she/it accepts responsibility for the performance of services as stated in the submitted proposal and be prepared to commence work immediately upon execution of the signed contract

G. There shall be no change in project work, budget or timetable without the prior approval by the Mayor and the Project Manager. Changes in the Scope of Services to be performed by the Proposer under the Agreement, including any decreases in the compensation to the Proposer or the time limitation for completion, which are mutually agreed upon by and between the City and the Proposer, shall be incorporated into the Agreement in the form of written amendments. Any and all amendments, alterations and changes in the Agreement will only be binding on the parties if executed in writing as set forth herein. No part of the contract shall be altered in any way without prior written consent of the City of Lynwood.

H. The Successful Consultant shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, age, handicap, veteran status or national origin. The Proposer shall take affirmative action to ensure that applicants are employed, and employees are treated during employment, without regard to race, color, religion, sex, age, handicap, veteran status, familial status, sexual orientation or national origin. Such action shall include, but not be limited to, the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other form of compensation; and selection for training, including apprenticeship. The Proposer agrees to post in conspicuous places, available to employees and applicants for employment, notice setting for the provisions of this non-discrimination clause. The Proposer will, in all solicitations or advertisements for employees placed by or on behalf of the Proposer; state that all qualified applications will receive consideration for employment without regard to race, color, religion, sex, age, handicap, veteran status or national origin. The Proposer agrees to comply with the "Governor's Code of Fair Practices" of January 12, 1966, Chapter 151B of the California General Laws, as amended and

Executive Orders which prohibit discrimination because of race, color, religion, national origin, age, sex, veteran status or handicap.

I. Ownership of Information: All information acquired by the Proposer from the municipality or from others at the expense of the municipality in the performance of the agreement shall be and remain the property of the municipality. All records, data files, computer records, work sheets, photograph negatives, deliverable products complete and incomplete, and all other types of information prepared or acquired by the Proposer for delivery to the municipality shall be and remain the property of the municipality. The Proposer agrees that he will use this information only as required in the performance of this agreement and will not, before or after the completion of this agreement, otherwise use said information, nor copy, nor reproduce the same in any form, except pursuant to the sole written instructions of the City. The Proposer further agrees to return said information in whatever form it is maintained by the Proposer.

J. Except as otherwise provided in the Agreement, the City of Lynwood may copyright any book, publication or the material developed in the course of this project subject to a royalty-free, non-exclusive and irrevocable license to the Federal Government to reproduce, publish, or otherwise use such copyrighted material and to authorize others to use the material for Government purposes.

K. Examination: By submitting a proposal, the Proposer warrants that he has examined the site of the work and has fully acquainted himself with all conditions and restrictions pertaining to the work and the execution thereof. No claim for any extra or extension of time will be allowed for failure to observe this requirement.

L. Liability: The Proposer agrees to indemnify, save harmless, and defend the City, its agents, and its employees and also Northgate Market LLC and its agents and consultants from and against any and all liabilities, claims, penalties, forfeitures, suits, and the costs and expenses incident thereto (including costs of defense, settlement, and reasonable attorneys fees), which it may hereafter incur, become responsible for, or pay out as a result of death or bodily injuries to any person, destruction or damage to any property, contamination of or adverse effects on the environment, or any violation of governmental laws, regulation, or orders caused, in whole or in part, by the Proposer's employees, or its agents or servants, in the performance of this contract.

M. Workers Compensation Insurance: The Proposer shall comply with State law, known as the Workmen's Compensation Act, and shall pay into the State Insurance Fund necessary premiums required by the Act to cover all employees working under the control of the Consultant and shall relieve the City from all costs due to accidents or other liabilities mentioned in said Act. Consultant shall also furnish at the time of delivery of the contract, and at such other times as may be requested, the official certificate of receipt showing that the payments hereinbefore referred to, have been made.

N. Insurance Coverage: The Successful Consultant shall, before commencing performance of the Contract, be responsible for providing and maintaining insurance coverage in force for the life of the Contract of the kind and in adequate amounts to secure all of the obligations under the Contract and with insurance companies licensed to write insurance in the State of California. All such insurance carried shall not be less than the kinds and amounts designated herein, and the Successful Consultant agrees that the stipulation herein of the kinds and limits of coverage shall in no way limit the liability of the Successful Consultant to any such kinds and amounts of insurance

coverage. All policies issued shall indemnify and save harmless the City of Lynwood, its agents and employees from any and all claims for damages to persons or property as may rise out of the performance of this Contract.

O. California Prevailing Wages: The Division of Occupational Safety issues prevailing wage schedules to cities, towns, counties, districts, authorities, and agencies of the state for construction projects and several other types of public work. These prevailing wage schedules contain hourly wage rates that workers must receive when working on a public project. Proposer must provide information as to whether this particular project can be completed as a non-prevailing wage project.

P. Comprehensive General Public Liability and Property Damage Liability Insurance:

The Successful Proposer shall carry Comprehensive General Liability Insurance providing for a limit of not less than Three Million Dollars ($3,000,000) for all damages arising out of bodily injury to or death of one person, and subject to that limit for each person, a total limit of not less than One Million Dollars ($1,000,000.00) for all damages arising out of bodily injuries or death of two or more persons in any one accident; and Successful Consultant's Comprehensive Property Damage Liability Insurance providing for a limit of not less than One Million Dollars ($1,000,000) for all damages arising out of injury to or destruction of property in any one accident, and subject to that limit per accident, a total (or aggregate) limit or not less than One Million Dollars ($1,000,000.00) for all damages arising out of injury to or destruction of property during the policy period. Successful Consultant will be required to carry Professional Errors and Omissions Insurance with a limit of no less than One Million Dollars ($1,000,000) and provide proof of said coverage in the submission of its bid.

1. No cancellation(s) of such insurance, whether by the insurer or by the insured party shall be valid unless written notice thereof is given by the parties proposing cancellation to the other party and to the City of Lynwood at least fifteen (15) days prior to the intended effective date thereof, which date shall be expressed in said notice, which shall be sent by registered mail, return receipt requested. These provisions shall apply to the legal representative(s), trustee in bankruptcy, receiver, assignee, trustee, and successor(s) in interest of the Successful Proposer.

2. All insurance coverage shall be at the sole expense of the Successful Proposer and shall be placed with such company as may be acceptable to the City of Lynwood and shall constitute a material part of the contract documents.

3. Failure to provide written proof to City and continue in force such insurance as aforesaid shall be deemed a material breach of the contract, and may constitute sufficient grounds for immediate termination of the same.

VII. Proposal Evaluation Information

A. *Rating Comparative Criteria*

All proposals will be reviewed in accordance with the City of Lynwood Procurement Procedures and final selection will be based upon an evaluation and analysis of the information and materials required under the RFP. Proposals that meet the minimum criteria will be reviewed for responses to the comparative evaluation criteria and be selected for further interview. The Selection Committee will assign a rating of "Highly Advantageous" (2 Points), "Advantageous" (1 Point),

or "Non Advantageous" (0 Points) to each comparative evaluation criteria in the initial review of proposals.

1. Comparative Evaluation Criteria

The Selection Committee may make a recommendation to the City Council, who may make a final decision on the award of a contract and in its discretion, may vary from the Selection Committee's recommendations as to which Successful Consultant to select or the terms of any contract. The proposal will be evaluated on the following criteria:

a. Brownfields Site Cleanup Project Expertise and Experience

Highly Advantageous: Clearly demonstrate expertise and more than ten (10) years experience with EPA Funded Brownfields Cleanup projects in communities similar to Lynwood.

Advantageous: Clearly demonstrate expertise and more than five (5) years experience with Brownfields Cleanup projects with Public Agencies.

Non-Advantageous: Less than five (5) years experience in environmental cleanup projects.

b. Estimated Task Completion Dates

Highly Advantageous: Completion of all Site Clean Up prior to July 1, 2012.

Advantageous: Completion of Site Clean Up sufficient to allow construction to proceed by January 22, 2011.

Non-Advantageous: A proposal that does not provide a potential construction start date.

c. Estimated Amounts of Contamination Removal

Advantageous: A minimum baseline of removal of free product is listed.

Non-Advantageous: No listing of any removal of free product.

d. Consultant's References and Experience

(Rating will be based on evidence that adequate qualified personnel are assigned to all phases of the project.)

Highly Advantageous: Individuals from the proposed project team have ten (10) years or more experience with environmental cleanup projects and references are of uniformly high quality.

Advantageous: At least one individual from the proposed project staff has contributed to or has five (5) years experience with Brownfield's cleanup projects and references are generally good but with certain qualifications.

Non-Advantageous: The project staff has less than three (3) years experience in environmental cleanup projects and references have raised serious questions regarding performance.

e. Quality of Response

Highly Advantageous: Presents clear, concise and complete statement of work and demonstrates an understanding of all tasks to be accomplished.

Advantageous: Presents, with some exceptions, a clear, complete statement of work and demonstrates a good, but not excellent understanding of all tasks to be accomplished.

Non-Advantageous: Presents a statement of work that is not very clear or complete and shows a weak understanding of the tasks to be accomplished.

B. *Interviews*

Interviews may be required at the City's discretion after review of the technical proposals. Proposers will be informed of selection for interview between April 17-19, 2010. Interviews will take place on April 20, 2010 after 1:00 p.m.. Presentations should not exceed thirty minutes in length, with a question and answer period to follow. If presentations are less than 30 minutes additional time, at the discretion of the Proposer, will be provided for questions and answers.

VIII. Proposal Submission Requirements

All proposers shall submit proposals in strict accordance with the submission requirements listed below. Any contractor failing to provide all of the following submission requirements will be considered "Not Responsive" and their proposal may be rejected without further consideration.

The information submitted must include the following items:

A. Cover Letter: A letter signed by an officer of the firm, binding the firm to all comments made in the proposal, is required. Include a primary contact person for the proposal.

B. Qualifications, Experience and other Information: Please provide:
   1. Names and addresses of all firms involved on the project.
   2. History, size and structure of firm(s).
   3. Names(s) of principals of firm(s).
   4. Identification of Principal in Charge and Project Manager.
   5. Experience with similar projects, specifically EAR grant-funded projects.
   6. Resumes of all personnel assigned to the project and the billing rates of those personnel. Future personnel changes will not be allowed without City approval.
   7. Listing of any actions taken by any regulatory agency or litigation involving the firm or its employees or agents with respect to any work performed.
   8. Proof of any insurances discussed above.
   9. A list of references related to similar projects, specifically EAR grant-funded projects. This information will be included on Appendix D, References.
   10. Provide a Fee Schedule for Common Equipment Usage such as PID, vehicles, mileage, etc. and include your company markup percentage on all direct charges.

11. Provide a Fee Schedule for Laboratory Analytical Fees for common analytes at this site. At a minimum include the following with associated EPA Methods: TPHg by 8015M, TPHd by 8015M, TPH with carbon chain ID by 8015M, BTEX by 8021, VOCs + Fuel Oxygenates by 8260B, ethanol by 8260B, Lead by 6010.

C. Understanding of Scope of Services: The proposal must describe the prospective consultant(s)'s general understanding of the scope of work and the key issues associated with performing the required consulting services in the specific disciplines involved. In addition, it must include statements covering prospective consultant(s)'s familiarity with the project and describe unusual conditions or problems prospective consultants believe may be encountered. The proposal must provide a project task list, with timing, detailed cost estimate and description of each task and/or component. The proposal should provide pricing for each specific component as set forth in the Design Report and the estimated date of completion of the tasks set forth in each component.

D. Approach and Methodology: Please provide a written detailed description of your approach to the scope of work, including the tasks described in the Scope of Services. Key issues for individualized focus include:
   1. Ability to meet all applicable state and federal regulations governing site cleanup in general and the requirements of the EAR Grant program, in particular.
   2. Methodologies to perform site cleanup and confirmatory sampling.
   3. Technologies or testing methods utilized to assess specific types of contamination.
   4. Innovative ideas for maximizing the value and amount of work that can be completed within the budget available for this contract. Provide rationale and evidence of the value and effectiveness of the proposal approach to the scope of services.
   5. Expected amount of remediation within 6 months.
   6. A potential performance based measurement system and payment schedule.

E. Plan of Service/Timeline: A Plan of Service describing the specific method for completing the scope of services within the established deadline including, but not limited to, those described in the Design Report. The Plan of Services must include a detailed description of the tasks to be performed by the consultant, the number of man-hours and other resources required to complete each task, and the expected time to complete each step. The Plan should include time schedules and milestones, personnel assignments and other information as necessary to demonstrate the consultant's ability to complete the project on time. The Plan of Services must explain how the firm provides Quality Control in each step.

F. Acknowledgment of Addenda: Each Proposer shall acknowledge the receipt of any addenda by signing and including it with their proposal.

G. Subcontracting: If subcontracting is planned, submit the firm(s), name(s), location(s), contact person(s), phone number(s), names of responsible operating officers, and evidence of any required insurance, permits, and licensing/authorization of proposal documents.

H. References: The City is requesting Proposer to submit a reference list. The references must adhere to the following specifications:

   1. Commercial References must:

a) Clearly demonstrate expertise and experience with Brownfields Cleanup projects with five (5) communities.
b) Detail the implementation of at least 3 remedial action plans which resulted in a remediation cost in excess of $1,000,000.

2. Financial References must:

a) Include a credit report from a credit reporting agency indicating the Proposer's credit history for the last five (5) years. The credit report must be dated no earlier than sixty (60) days prior to the submission date.
b) Disclose any current or pending litigation.

IX. Additional Submission Information

A. A voluntary pre-proposal conference will be held on April 5, 2010 at 3:00 p.m. 11600 Long Beach Blvd., California, 90262. No questions will be answered at the conference. The remediation compound will be unlocked at that time for review. The last day to submit questions is 7:00 a.m. April 12, 2010. All questions and potential answers will be provided to all persons identifying their company as potential Proposers. Potential Proposers may provide their e-mail address to enishii@lynwood.ca.us. Responses may be either posted on the website or e-mailed to all Potential Proposers.

B. Proposals are to be submitted by 11:00 a.m. on April 15, 2010 Postmarks will not be considered. Proposals submitted on any other form will not be accepted as valid proposals. Proposals shall not exceed 24 pages in length, 1 1/2 spaced, single sided. Proposals shall have a maximum of 12 characters per inch and margins of no less than 1 inch on all sides. Exhibits do not count towards the page limit, however no more than 20 pages of exhibits, single sided, may be attached to a proposal. Font size limitations do not apply to exhibits.

C. Envelopes containing sealed proposals will be accepted at the City of Lynwood, City Clerk's Office, 11330 Bullis Road, Lynwood, California 90262 the time indicated on the advertisement. It is the sole responsibility of the Proposer to ensure that the proposal arrives on time at the designated place. Six sealed envelopes containing the proposal marked "Consulting Services for Site Remediation" should be submitted along with one device or disk providing the proposal in a machine readable format. (See section J below)

D. If interviews are necessary, interviews for the most responsive Proposers will occur on April 20, 2010 after 1:00 p.m.. The contract may be awarded by the City within thirty (30) days after the proposal opening. The time for award may be extended up to 60 additional days by mutual agreement between the City and the responsible and responsive Proposer.

E. Addenda: If any changes are made to the Request for Proposal (RFP), an addendum will be issued. Addenda will be either posted on the City website or e-mailed to all Proposers on record as having picked up the RFP and leaving an email address. Contractors shall be responsible for responding to issues set forth in the addenda.

F. Questions concerning this proposal must be submitted in writing to enishii@lynwood.ca.us before 7:00am on April 12, 2010. Questions may be e-mailed. Written responses may be e-mailed to

those on record as to being a Potential Proposer and providing an email address or responses may be posted on the website. Potential Proposers are responsible for checking for updates.

G. After the proposal opening, a Proposer may not change any provision of the proposal in a manner prejudicial to the interests of the City or fair competition. Minor informalities will be waived or the Proposer will be allowed to correct them. If a mistake and the intended proposal are clearly evident on the face of the proposal document, the mistake will be corrected to reflect the intended correct proposal, and the Proposer will be notified in writing.

H. The City may cancel this RFP, or reject in whole or in part any and all proposals, if the City determines that the cancellation or rejection serves the best interests of the City of Lynwood.

I. All proposals submitted in response to this RFP must remain firm for sixty (60) days following the proposal opening.

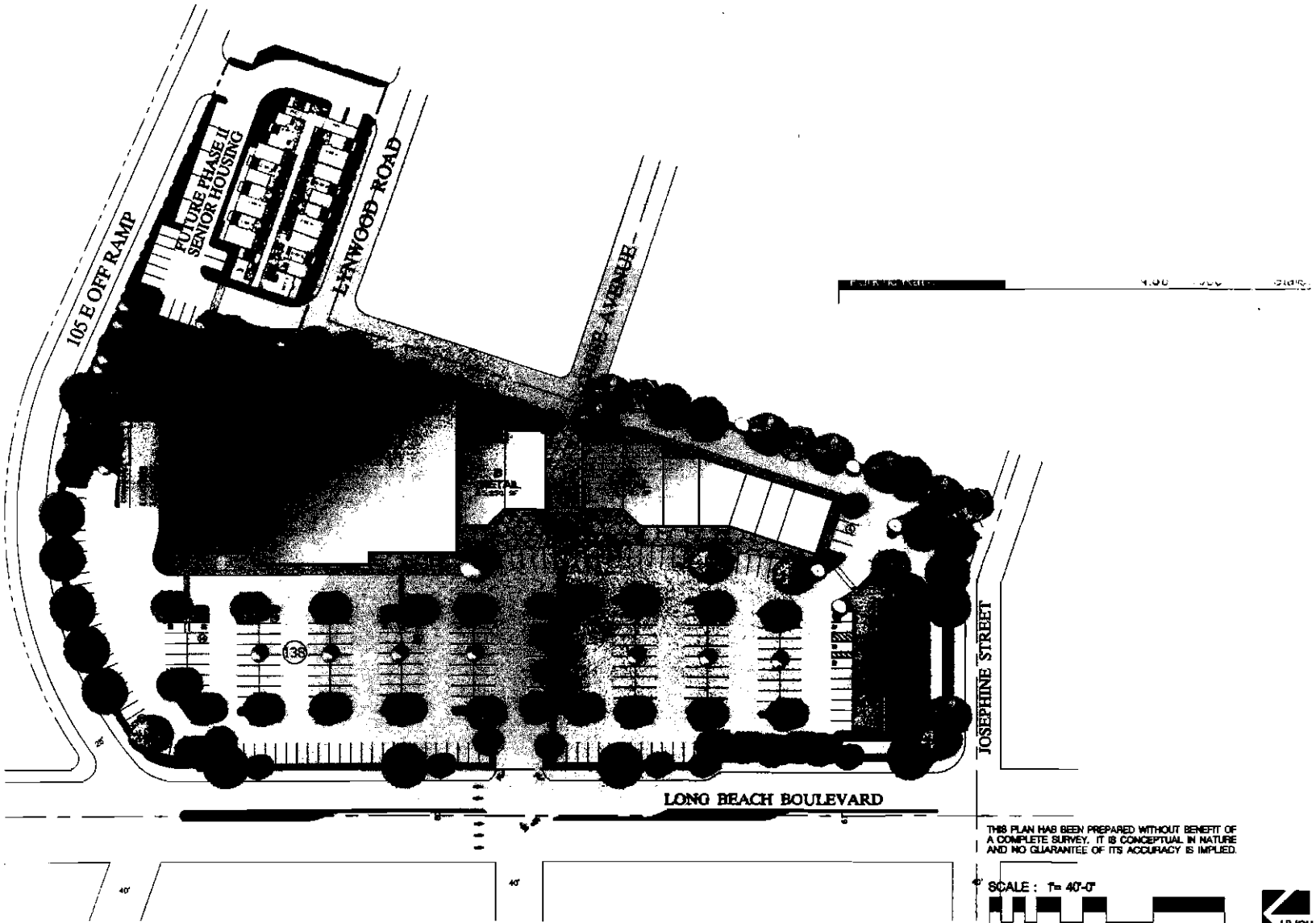
J. Each Proposer will include within the sealed proposal an electronic version of their proposal on either a CD, DVD, or other machine readable format in Microsoft Word format or other machine readable format. It is the Proposer's responsibility to determine the compatibility of the technology and material submitted in relation to the technology available to the Selection Committee. Any firm that does not comply with the submission requirements may be considered "as non-responsive" and no further review will take place by the City.

K. Final Approval and Payment

1. Final products outlined in the Scope of Services of this Request for Proposals and the written Agreement must be approved by the City of Lynwood. If, for any reason, the final products do not conform with the terms and conditions of the Agreement or with the appropriate Federal, State, and municipal laws, ordinances, rules and/or regulations, the City of Lynwood reserves the right to withhold payment until all conditions are met. Neither the City's review, approval or acceptance of, nor payment for, any of the services furnished shall be construed to operate as a waiver of any rights under the contract or any cause of action arising out of the performance of the contract.

Attachment A

Potential Site Plan



THIS PLAN HAS BEEN PREPARED WITHOUT BENEFIT OF A COMPLETE SURVEY. IT IS CONCEPTUAL IN NATURE AND NO GUARANTEE OF ITS ACCURACY IS IMPLIED.

SCALE : 1"= 40'-0"

0 40' 80' 100' 140' 200'

PAC architects
Architecture
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3950 Long Beach Boulevard
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CLIENT:

NORTHGATE MARKETS
522 East Vermont Avenue
Anaheim, CA 92805

PROJECT :

LYNWOOD PLAZA
NORTHGATE GONZALEZ
SEC LONG BEACH BLVD &
CENTURY FREEWAY
LYNWOOD, CA.

NO	REVISIONS	DATE
1		
2		
3		
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5		
6		
7		
8		

CHECKED BY:	JA/VGP
DRAWN BY:	JA/VGP
DATE	11/18/2009
SCALE:	1"=40'-0"
JOB NO.:	09017

Sheet Title:

SA-8

Attachment B

Interim Remedial Action Plan (IRAP)

Please find the RFP and the IRAP at:

http://www.findrfp.com/gov/List.aspx?id=73291

Attachment C

Interim Remedial Action Design Report

CITY OF LYNWOOD REDEVELOPMENT AGENCY

LYNWOOD, CALIFORNIA

INTERIM REMEDIAL ACTION PLAN
DESIGN REPORT
NORTHGATE MARKETS PROJECT
I-105 / LONG BEACH BOULEVARD
LYNWOOD, CALIFORNIA

PROJECT #051051

March 24, 2010

Office Location:

GANNETT FLEMING, INC.

One Technology Drive, Suite F207

Irvine, California 92618-2355

Office Contact:

Leo Rebele

(949) 753-1970

Gannett Fleming

Your Trusted Advisor Since 1915

CONTENTS

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FIGURES

See Design Drawings

APPENDICES

APPENDIX A – LNAPL Extraction Well Photographs

APPENDIX B – Well Construction Details

APPENDIX C – Head Loss Calculations

LIST OF ACRONYMS

1,1-DCE	1,1-dichloroethene	MCLs	Maximum contaminant levels
µg/kg	Micrograms per kilogram	mg/kg	Milligram per kilogram
µg/L	Micrograms per liter	mg/L	Milligram pep liter
1,1,2-TCA	1,1,2-trichloroethane	mg/m^3	Milligrams per cubic meter
1,2-DCA	1,2-dichloroethane	NAPL	Non-aqueous phase liquid
1,2-DCE	1,2-dichloroethene	ORC	Oxygen release compound
AMP	Air Monitoring Plan	ORP	Oxidation-Reduction Potential
AQMD	Air Quality Management District		
ARAR	Applicable or Relevant and Appropriate Requirement	PCBs	polychlorinated biphenyls
ARARs	Applicable or Relevant and Appropriate Requirements	PCE	perchloroethene
BC	Brown and Caldwell.	PDF	Portable Document Format
bgs	below ground surface	PG	Professional Geologist
CAD	Computer Automated Design	pH	Potential of Hydrogen
Cal/EPA	California Environmental Protection Agency	Phase I ESA	Phase I Environmental Site Assessment
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	PID	Photo ionization Detector
CEQA	California Environmental Quality Act	PRGs	Preliminary remediation goals
CFR	Code of Federal Regulation	PVC	Poly-vinyl chloride
CHHSLs	California Human Health Screening Level	QA/QC	Quality Assurance / Quality Control

CLARRA	California Land and Revitalization ACT	QAP	Quality Assurance Plan
CLLRA	California Land Use and Revitalization Act	QAPP	Quality Assurance Protection Plan
COCs	Contaminants of concern	RAOs	Remedial Action Objectives
COPCs	Contaminants of potential concern	RAP/RP	Remedial Action Plan and Response Plan
DHS	Department of Health Services	RCRA	Resource Conservation Resource ACT
DNAPL	Dense non-aqueous phase liquid	RI	Remedial Investigation
DO	Dissolved Oxygen	ROI	Radius of influence
DTSC	Department of Toxic Substances Control	RWQCB	California Regional Water Quality Control Board
DWP	Department of Water Resources	SCAQMD	South Coast Air Quality Management District
ELAP	Environmental Laboratory Accreditation Program	SLIC	Site Leaks Investigation and Cleanup
EPA	Environmental Protection Agency	SMP	Soil Management Plan
ERD	Enhanced reductive dechlorination	SOP	Standard Operating Procedures
ERH	Electrical Resistance Heating		
ERP	Emergency Response Plan	STLC	Soluble Threshold Limit Concentration
FID	Flame Ionization Detector	SVE	Soil vapor extraction
FS	Feasibility Study	SVOCs	Semi-volatile organic compounds
ft^2	square feet	TCE	Trichloroethene
GAC	Vapor-Granular activated carbon	TCLIP	Toxicity Characteristic Leaching Procedure
GC	Gas Chromatography	TPH	Total petroleum hydrocarbons
GCP	Grading Contingency Plan	UIC	Underground Injection Control

GF	Gannett Fleming	USA	Underground services Alert
HSP	Health and Safety Plan	USCS	Unified Soil Classification System
HHRA	Human Health Risk Assessment	USEPA	United States Environmental Protection Agency
HI	Hazard Index	USTs	Underground Storage Tank
HVOC	Halogenated Volatile Organic Compound	VCP	Voluntary Cleanup Program
IC	Institutional Controls	vGAC	Vapor-phase granular activated carbon
LACFD	County of Los Angeles Fire Department	VOCs	Volatile organic compounds
LARWQCB	Los Angles Regional Water Quality Control Board		
LNAPL	Liquid, non-aqueous phase liquids		
m/s	meters per second		

1.0 INTRODUCTION

1.1 Scope of Work and Scope Limitations

This Interim Remedial Action Plan (IRAP) Design Report (Report) describes the design of vacuum-enhanced light, non-aqueous phase liquid (LNAPL) recovery systems for the removal of free product at proposed Northgate Markets Development in Lynwood, California (the "Site"). This report is being submitted pursuant to the IRAP for the Site prepared by Gannett Fleming, Inc., (GF) dated October 16, 2009 and approved by the California Regional Water Quality Control Board (CRWQCB) in a letter dated December 22, 2009 (CRWQCB, 2009). A general description of the equipment and operation of the LNAPL recovery systems was provided in the IRAP (GF 2009).

The design is based on the known limits of the LNAPL at the time of writing this Report; however, a data gap investigation will be performed in the near future. The design may need to be modified based on the results from the data gap investigation to incorporate the full limits of the LNAPL. In addition, this design assumes that the LNAPL recovery systems will be installed and operating prior to Site redevelopment. This assumption should be verified with the Developer and the City of Lynwood prior to installation as some design elements may require modification to accommodate Site redevelopment.

This Report and associated figures and appendices represent a preliminary design only. The Contractor shall be responsible for preparing final construction drawings and obtaining the proper permits prior to implementing the final design.

1.2 Report Structure

This Report provides a brief description of the Site and impacts as they relate to the proposed LNAPL recovery systems. Then, the design basis for each component of the LNAPL remediation systems is presented.

1.3 Site Description

The Northgate Markets Development Project Area is comprised of approximately 6 acres, including a mix of commercial and residential properties (See Design Sheet 3). The primary commercial properties include the former "Garfield Express" property at 11600-11618 Long Beach Boulevard (which comprises five businesses including an active gasoline service station), the Acosta's Restaurant property located at 11700 Long Beach Boulevard, and the U-Haul facility located at 11716 Long Beach Boulevard. The remaining portions of the proposed Lynwood Springs Development include several residences and City-owned right-of-way property associated with Lynwood Road, Lewis Road and Louise Street.

2.0 DESIGN BASIS

2.1 LNAPL Recovery Technology

LNAPL recovery by direct pumping from extraction wells typically ceases to be effective long before the LNAPL has been completely removed because pumping action alone cannot overcome the capillary forces that retain the remaining LNAPL within nearby soil or just outside of the well screen. Application of vacuum to the extraction wells significantly improves LNAPL recovery by reducing the air pressure in the extraction wells below the nonwetting entry pressure, allowing both LNAPL and water to enter the extraction well. Vacuum-enhanced LNAPL recovery systems have been able to achieve up to a 21-fold increase in LNAPL recovery rates compared to pumping alone under various geologic conditions. Thus vacuum-enhanced a LNAPL recovery system shall be installed at the Site.

2.2 Site Geology and Hydrogeology

During site investigation activities performed between 1997 and 2007, soil types were observed to vary laterally and vertically across the investigated area. The first geologic unit encountered at the Site is predominantly silt to silty sand to a depth of approximately 10 feet bgs, followed generally by thick layer of clay containing thin interbeds of silt and sandy silt to a depth of approximately 25 feet bgs. This unit is consistent with sediments described as the Bellflower Aquiclude and restricts the vertical movement of groundwater. The Bellflower Aquiclude also has limited quantities of groundwater. During previous investigations, groundwater was first encountered at approximately the same elevation as the bottom of the clay layer and the top of the underlying poorly graded sand and silts at an approximate elevation of 60 feet above mean seal level (MSL). When the monitoring wells were installed at the Site (1997-2001), the depth to first groundwater was approximately 25 and 33 feet bgs and later stabilized at approximately 20 to 22 feet bgs. Groundwater elevations have reportedly fluctuated with lowest measurements between 2002 and 2004 and highest levels measured in late 2005, with the change in groundwater water elevations ranging from 7 to 10 feet.

2.3 Site History

The Site is the location of two documented leaking underground storage tank (LUST) sites, which resulted in significant soil and groundwater contamination, including the presence of widespread free product. The two documented releases include the "Garfield Express" service station located at 11600 Long Beach Boulevard and the U-Haul facility, located at 11716 Long Beach Boulevard. In addition, gasoline service stations were located both on the current Acosta's Restaurant property and the southern portion of the U-Haul property. The dissolved-phase groundwater plume extends over virtually the entire Site and LNAPL contamination appears to be present beneath the previously unexplored areas.

A dry cleaner was also historically located on the Site immediately to the north of Louise Street, which resulted in a release of chlorinated volatile organic compounds (VOCs) that affected soil and groundwater. The lateral and vertical extent of chlorinated VOCs in soil and groundwater has not been fully defined. Chlorinated VOCs are known to extend onto the U-Haul property to the south of the historical dry cleaner location.

Groundwater monitoring activities, beginning in 1998 with the progressive installation of groundwater wells, confirmed the presence of Total Petroleum Hydrocarbons (gas and diesel, TPH-g and TPH-d respectively) and fuel oxygenates in at least two plumes underneath the property. The unsaturated to partially saturated zone above the clay, within the clay, and the permeable zone beneath the clay comprise the primary zones where LNAPL appears. Highest concentrations of TPH-g contaminants appear to be found within the 16 to 25 feet bgs interval, which generally corresponds to the top and bottom of the clay layer, respectively. This vertical interval likely represents the range in fluctuations of the water table, and the development of a "smear zone," since the gasoline releases. The thickness of the smear zone has fluctuated over time to a maximum of 16.67 feet in MW-3 (8/25/1998).

LNAPL product recovery efforts began in 1999 at the Garfield Express property. In 2000, the product recovery system was shut down at the direction of the LARWQCB and hand bailing of monitoring wells commenced at that time. Between 2001 and 2003, a vapor extraction system, designed to operate in conjunction with the existing LNAPL recovery system was installed at the Site under the direction of Underground Storage Tank Fund Advisory and Services (USTFA&S). The system reportedly began operation in June 2003 and ceased operation in June 2005 due to mechanical and electrical issues. Since then, various consultants have been manually removing LNAPL from the wells at the Garfield Express property, generally on a monthly basis, utilizing hand bailers and skimmer pumps. It is our current understanding that LNAPL removal has not been performed at the U-Haul property to date. Fourth quarter 2008 groundwater monitoring data indicate that LNAPL is present in 18 of the 41 groundwater monitoring wells gauged, with a maximum thickness of 4.95 feet at monitoring well, MW-8. On May 27, 2009, the LARWQCB issued the revised CAO requiring a RAP to implement an aggressive and active free product removal system to remove free product on the Garfield Express and the U-Haul properties. The LNAPL recovery system proposed is intended to address that requirement.

3.0 LNAPL RECOVERY SYSTEM COMPONENTS

The LNAPL recovery system will utilize the remaining functional equipment and infrastructure present at the Site and will expand LNAPL recovery operations to include the U-Haul property. Based on the current size and configuration of the two LNAPL plumes, a second remediation compound is proposed to be installed to prevent excessive and disruptive trenching operations, reduce head loss associated with long piping runs, and to allow for more control of the individual LNAPL recovery rates.

The existing remediation compound will be utilized for ten (10) LNAPL recovery wells located throughout the Garfield Express property (MW-2, MW-3, MW-5, MW-7, MW-8, MW-9, MW-10, MW-11, MW-14, and MW-22). A new remediation compound, of similar construction, will be located at the northeast corner of the U-Haul property, near the intersection of Lewis Street and Louise Street. The final location of the remediation compound will be coordinated with the Developer. The new remediation compound will be utilized for nine (9) LNAPL recovery wells located on and in the immediate vicinity of the U-Haul property (MW-12, MW-15, MW-16, MW-21, MW-23, UH-1, EX-1, EX-2, and EX-3). This section describes the main components of the LNAPL recovery systems. Each component shall be used as a measurable deliverable in terms of cost and time to complete.

Alternatively, a single remediation compound may be located near the center of the Site, along Louise Street. This remediation compound would house the existing equipment and additional equipment required to provide adequate vacuum and recover LNAPL for the entire wellfield of nineteen (19) wells. A preliminary layout for this alternative is provided in Design Sheet 5 ALT. If this alternative is chosen, the Contractor shall provide costs and details for the demolition of the existing remediation compound as well as equipment sizing and layout to ensure the remediation compound is sufficient to house the necessary equipment for the nineteen (19) wells. The final location of the remediation compound will be coordinated with the Developer.

3.1 Component 1 - LNAPL Extraction Wells

The LNAPL recovery systems shall utilize the following nineteen (19) monitoring wells as LNAPL recovery wells (See Design Sheet 4):

MW-2, MW-3, MW-5, MW-7, MW-8, MW-9, MW-10, MW-11, MW-12, MW-14, MW-15, MW-16, MW-21, MW-22, MW-23, UH-1, EX-1, EX-2, and EX-3

These groundwater monitoring wells and well vaults shall be modified and/or re-constructed to perform as LNAPL recovery wells (See Design Sheet 6). At least one monitoring well, MW-5, appears to have been paved over. Photographs of the remaining monitoring wells, with the exception of MW-14, are provided in Appendix A. Proper permits shall be obtained for wells that require re-installation. Wells that are re-constructed shall be located and constructed in a similar fashion as the original well. Well construction details are provided in Appendix B.

Well Vaults

Each LNAPL recovery well shall have well vaults that are traffic rated to withstand H-20 traffic loading and shall be a minimum of 24-inches by 24-inches in size (See Design Sheet 6). The vaults shall be able to be properly secured by bolts or other locking mechanism. The vaults shall be installed above existing grade and with weather sealing to minimize the amount of water entering the vault.

LNAPL Pump Installation and Wellhead Assembly

A pneumatic skimmer pump will be installed in each of the nineteen LNAPL recovery wells such that the inlet screen covers the LNAPL/groundwater interface. Pump materials shall be compatible with LNAPL constituents to prevent corrosion. The pumps will operate using an air

compressor and controller to control individual pumping durations as evaluated during system start-up and throughout the operation of the LNAPL recovery system.

The wellhead shall have the appropriate fittings and openings to allow proper operation of the pneumatic pump and to allow for adequate performance monitoring (See Design Sheet 6). At a minimum the wellhead shall have air tight fittings for air delivery, air exhaust, and product recovery lines to connect to the pneumatic pump. In addition, a sampling port shall be installed to allow for vapor sampling, vacuum monitoring, and LNAPL thickness measurements. A 3-way valve shall be installed on the product recovery line to allow for collecting LNAPL samples at the wellhead.

3.2 Component 2 - Trenching and Conveyance Piping Installation

Trenching and piping for the LNAPL recovery systems were designed to allow for site grading to occur (up to 5 feet bgs) without having to re-trench and re-pipe. This will allow the piping to be re-used after site grading has occurred for the LNAPL recovery systems or for a final remedial measure for the Site. The trenching layout was designed to coincide with the trenching layout for the previous LNAPL recovery system and SVE system, to the extent practicable (See Design Sheet 5). This will minimize Site disruption and will allow for proper decommissioning of the existing piping that is known to have problems.

Notifications and Permits

Underground Service Alert (USA) shall be notified at least 48 hours in advance of any excavation activities. All proposed excavation areas shall be clearly marked with white paint or surveyors' flagging as required by USA. In addition, a geophysical survey using magnetics, ground penetrating radar, and/or electromagnetic line location will be conducted to help identify subsurface lines and obstructions. Available site-specific utility maps shall be reviewed to determine the locations of nearby electric, cable, telephone, gas, water, sewer, and data transmission lines. On-site meetings will also be held with City of Lynwood Public Works

personnel to verify the locations of all City-owned utilities, prior to commencing field work. The Contractor shall obtain a City of Lynwood Public Works Department encroachment permit, if deemed necessary to trench across public right-of-ways.

Trenching and Conveyance Piping

Conveyance piping including pressurized air lines, free product return lines, and SVE piping shall be installed in engineered trenches capable of withstanding H20 traffic loading. Trenches shall be excavated to approximately 6.5 feet bgs in order to allow for Site redevelopment, which is expected to require grading up to 5 feet bgs. The pressurized air lines and free product return line shall be installed within a separate conduit from the vacuum line, in order to provide secondary containment, to provide ease of installation and replacement, if necessary, and to minimize head loss within the vacuum line. Preliminary head loss calculations are provided in Appendix C for reference. Conveyance piping shall be 2-inch Schedule 40 polyvinyl chloride (PVC) or high density polyethylene (HDPE) pipe and shall be labeled at a minimum of every 10 lineal feet. Air delivery and product recovery tubing shall be compatible with the materials they are conveying, respectively.

Pull boxes shall be installed along the piping runs to aide in installation, troubleshooting, replacement, and relocation during the redevelopment. Pressure and/or vacuum testing shall be performed on all of the installed conveyance piping prior to use. Trenching and piping installed previously will be inspected for possible reuse; however, based on discussion with prior contractors working at the Site, the improper installation of the piping is believed to the primary cause of the previous LNAPL recovery system's failure. Existing piping that is not suitable for reuse will be excavated and the trench will be reused, if possible to relocate conveyance piping prior to being backfilled. Due to the impending redevelopment of the Site, trenches will be surveyed after completion to produce an as-built drawing. A preliminary trenching layout is presented in Sheet 5 of the Design Drawings.

Excavated soil will be screened for possible impacts by visual inspection and monitoring using a flame-ionization detector (FID). Potentially impacted soil shall be segregated and will be sampled for VOCs by USEPA method 8260B and for TPH-g and TPH-d by USEPA method 8015 modified. Based on the results of the analyses, impacted soil shall be loaded onto trucks for offsite disposal. Remaining soil may be reused as backfill material. Dust suppression shall be performed during trenching operations and on uncovered soil stockpiles by lightly spraying or misting the work areas with water or a surfactant if water is not sufficient.

3.3 Component 3 - Remediation Compounds

The existing remediation compound located in the northern portion of the Site appears to be intact. However, the equipment and utility connections need to be refurbished and re-established to working condition. A second remediation compound will need to be designed and constructed in the northeast portion of the U-Haul property.

Existing Remediation Compound

Construction drawings for the existing remediation compound and associated LNAPL recovery system were not available for review at the time of writing this Report. As such, information provided is based solely on observations made during a Site visit on March 11, 2010.

The existing remediation compound appears to be an open roof structure constructed of cinder blocks (8 in x 8 in x 16 in) with overall dimensions of approximately 24 feet wide by 18 feet long and 14 feet tall (See Design Sheets 7 and 8). Two roll-up doors approximately 12 feet high and 8 to 10 feet wide are located at the front of the compound for equipment access. A door is located on the side of the compound for regular access. No sump or drainage was observed within the compound. However, several openings are located along the lower part of the wall (approximately 2 feet above ground), presumably for utility lines and to allow excess water to leave the compound during large rain events.

Utility lines to the compound that presumably included electric and natural gas appear to have been damaged and are no longer functional. The Contractor shall repair the utility connections to the compound.

The following is a list of the equipment located within the existing remediation compound:

- A Baker Furnace Inc., Thermal/Catalytic Oxidizer Skid Unit (Model #SX-300, Serial #445);
- A 1,000 gallon above ground product tank from Containment Solutions (Model LDP1000P);
- A 6 hp, 33 gallon, single cylinder/oil-free Craftsman Professional air compressor; and
- A Speedaire, by Dalton Electric Manufacturing Co., compressed air dryer (Model 4XX28, Serial #G005A1150005304).

In addition several 55-gallon drums and a well manifold with associated valves and fittings were located along the southern wall. The Contractor shall refurbish and reuse the existing equipment, to the extent practicable, to use for the LNAPL recovery system.

New Remediation Compound

The contractor shall obtain a City of Lynwood Building and Safety Department permit and all other necessary permits to construct the second remediation compound. A preliminary design, based on the existing remediation compound, is provided in Sheets 7 and 8 of the Design Drawings. The final construction drawings shall be provided by the Contractor after coordinating with the Developer. Electric and natural gas utilities shall be connected to the remediation compound with the appropriate permits and meters.

Equipment shall be installed within the compound, similarly to the existing remediation compound equipment.

Electrical

Electrical design will be in accordance with:

- NFPA 70, National Electrical Code, Latest Edition
- NFPA 72, National Fire Alarm Code, Latest Edition
- NFPA 497, Explosive Materials Code, Latest Edition
- NFPA 780, Identification of the Fire Hazards of Materials, Latest Edition
- Southern California Edison: requirements for electric service
- IES Lighting Handbook, 9th Edition
- IEEE Standards (as applicable) including:
    - IEEE 141 Electrical Power Distribution for Industrial Plants (Red Book)
    - IEEE 241 Grounding of Industrial and Commercial Power Systems (Green Book)
    - IEEE 1100 Powering and Grounding of Sensitive Electronic Equipment

City and State Building Codes, including all requirements which provide amendments to or supersede the above listed references.

Based on our knowledge, the Site is provided with an overhead service from Southern California Edison utility 208/120V; 3 phase; 4 wire. The Contractor shall verify the information with Southern California Edison.

The electrical power distribution system for this Site shall be from an overhead distribution system to the various structures. For the purpose of this design it is intended to use a 208/120 volt distribution system, unless noted otherwise. This low voltage distribution equipment will serve the large three phase motor and equipment requirements. A preliminary electrical one-line drawing is provided in Design Sheet 10.

There will be no modifications to the size and overall service to this facility. The electrical distribution system will be designed in accordance with recommendations of IEEE 141 Red Book.

The new Remediation compound will be fed from the existing service to a 208V/120V three phase, 4 wire panel board. All equipment will be provided with necessary disconnect switches. All equipment will be NEMA 4 rated unless noted otherwise on the drawings. All equipment will be powered from the panel board.

Lighting

Exterior lighting shall be provided for security and general safety of the operator personnel. We propose the use of high pressure sodium type lamp/fixtures for this application due to their high efficiency and long life. For this type, the lighting will be provided through the use of building mounted, vandal-proof perimeter fixtures.

Foot candle illumination levels will be designed based on the recommendations of Illuminating Engineering Society of North America (IES) for the areas and tasks associated with each facility. Nominal exterior lighting foot candle levels shall be 0.5 fc at 10 feet from building.

Other Components

The design will provide for a solidly grounded system; in conjunction with both the electrical power distribution system (NFPA 70, IEEE 142 Green Book) and the instrumentation system (IEEE 1100 Emerald Book) grounding requirements. Use of grounding electrodes and exterior ground grids will be considered in the design for this system.

No lightning protection system is anticipated for this structure.

No uninterruptable power supply system is required.

No telephone/data, security or fire detection requirements are anticipated for this structure.

3.4 Component 4 - Equipment Installation and Start-up Testing

Each remediation compound, at a minimum, shall have the following equipment, or equivalent, installed:

- A Thermal/Catalytic Oxidizer Skid Unit with a knock-out pot, liquid transfer pump, blower capable of at least 150 scfm at 100 inches of water vacuum, and a thermal/catalytic oxidizer unit;
- A 1,000 gallon above ground product tank with secondary containment;
- An oil-free air compressor and air dryer capable of providing clean compressed air to the pneumatic LNAPL pumps and the correct pressure provided by the manufacturer; and
- A programmable controller for the LNAPL pumps.

The equipment shall be assembled, connected, and equipped with appropriate gauges and meters to allow adequate monitoring during operation. At a minimum, there shall be high level gauges within the knock-out pot and LNAPL storage tank that will shut down the system once the liquid level reaches the high level gauge. The influent vapor stream shall have temperature, pressure, and flow gauges. The influent product line shall have a flow gauge, or other device, to monitor the amount of LNAPL removed. The thermal/catalytic oxidizer unit shall be equipped with a control panel that records system run time and other operational parameters.

In addition to the equipment listed above, a well manifold shall be constructed within the remediation compounds with sample ports and diaphragm valves for each well.

A start-up phase shall commence after the installation of the equipment, piping and pumps have been installed and the proper SCAQMD permits have been obtained. The objective of the start-

up phase will be to confirm that the system has been constructed as designed, check that the equipment operates as specified, making any necessary modifications in the system, and to gather and evaluate initial operational data. Specifically, the product and groundwater levels, along with LNAPL recovery rate, will be checked at each well and the associated controller will be set appropriately to maximize the LNAPL recovery from each well. Additionally, the vacuum at each well will be monitored and adjusted to operate between approximately 5 and 40 inches of water. System noise shall also be measured during equipment startup and reduced as necessary to meet acceptable noise thresholds per City code.

4.0 HEALTH AND SAFETY AND QUALITY ASSURANCE

4.1 Health and Safety Plan

LNAPL recovery system installation activities will be conducted so as not to create unacceptable risks to human health and safety or the environment. The Contractor responsible for the LNAPL recovery system installation will prepare a detailed Health and Safety Plan (HASP) prior to the commencement of work. The Contractor's HASP will, at a minimum, comply with applicable federal health and safety regulations set forth in 29 CFR 1910 and 1926 and California Health and Safety Regulations as set forth in Title 8, California Code of Regulations, and guidance established by the RWQCB, the Department of Toxic Substances Control (DTSC), and/or USEPA.

4.2 Field Logbook

A field logbook will be maintained during system installation and trenching activities. The field logbook will serve to document observations, on-site personnel, equipment arrival and departure times, and other vital project information. Logbook entries will be complete and accurate enough to permit reconstruction of field activities. Logbooks will be bound with consecutively numbered pages. Each page will be dated and the time of entry noted. All entries will be legible, written in black ink, and signed by the individual making the entries. Language will be factual, objective, and free of personal opinions or other terminology that might prove inappropriate. If an error is made, corrections will be made by crossing a line through the error and entering the correct information. Corrections will be dated and initialed.

4.3 Waste Disposal

In the event that the removed soil or debris is profiled as a hazardous waste, the Uniform Hazardous Waste Manifest (hazardous waste manifest) form will be used to track the movement of soil from the point of generation to the point of ultimate disposition.

All waste manifests will include information such as:

- Name and address of the generator, transporter, and the destination facility;
- US DOT description of the waste being transported and any associated hazards;
- Waste quantity;
- Name and phone number of a contact in case of an emergency; and
- Site USEPA Hazardous Waste Generator Number.

The manifests will be scanned and provided to the RWQCB as part of subsequent reporting for the Site.

5.0 INTEGRATION WITH PROPOSED DEVELOPMENT

The final design and installation of the LNAPL recovery system will be coordinated with the City of Lynwood Redevelopment Agency and the Developer to minimize the impact the system will have on the proposed redevelopment plan and to ensure the LNAPL recovery system continues to operate through the redevelopment process, as necessary. Specifically, trenches will be designed so that conveyance piping will be located below the depth that would be disrupted during grading operations and the remediation compound(s) will be located so that it will not be required to be moved during the redevelopment process. The Contractor shall coordinate with the Developer and provide a detailed schedule to complete each component of the LNAPL recovery system installation.

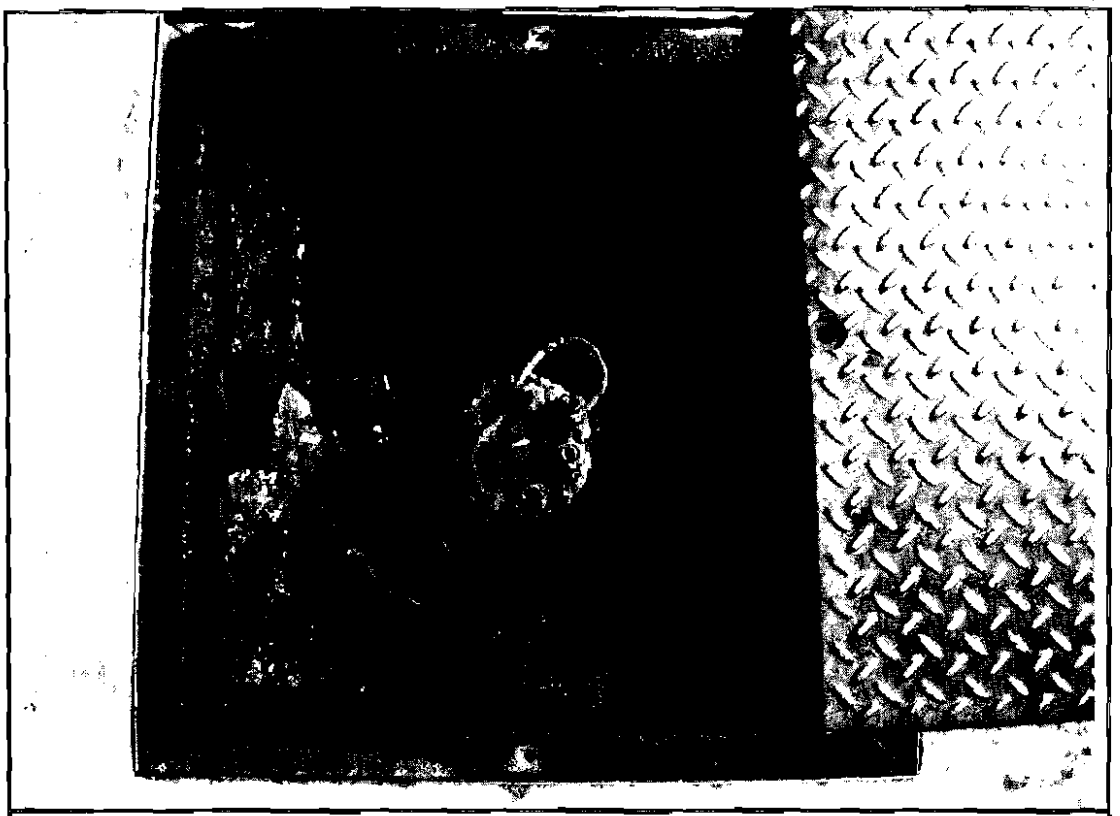
6.0 REFERENCES

California Regional Water Quality Control Board, 2009. Underground Tanks Program – Emergency, Abandoned, and Recalcitrant (EAR) Petroleum Underground Storage Tank Site Priority List, Garfield Express Property (Priority A-1 Site), 11600 South Long Beach Boulevard, Lynwood, CA (UST File No. R-23001). December 22.

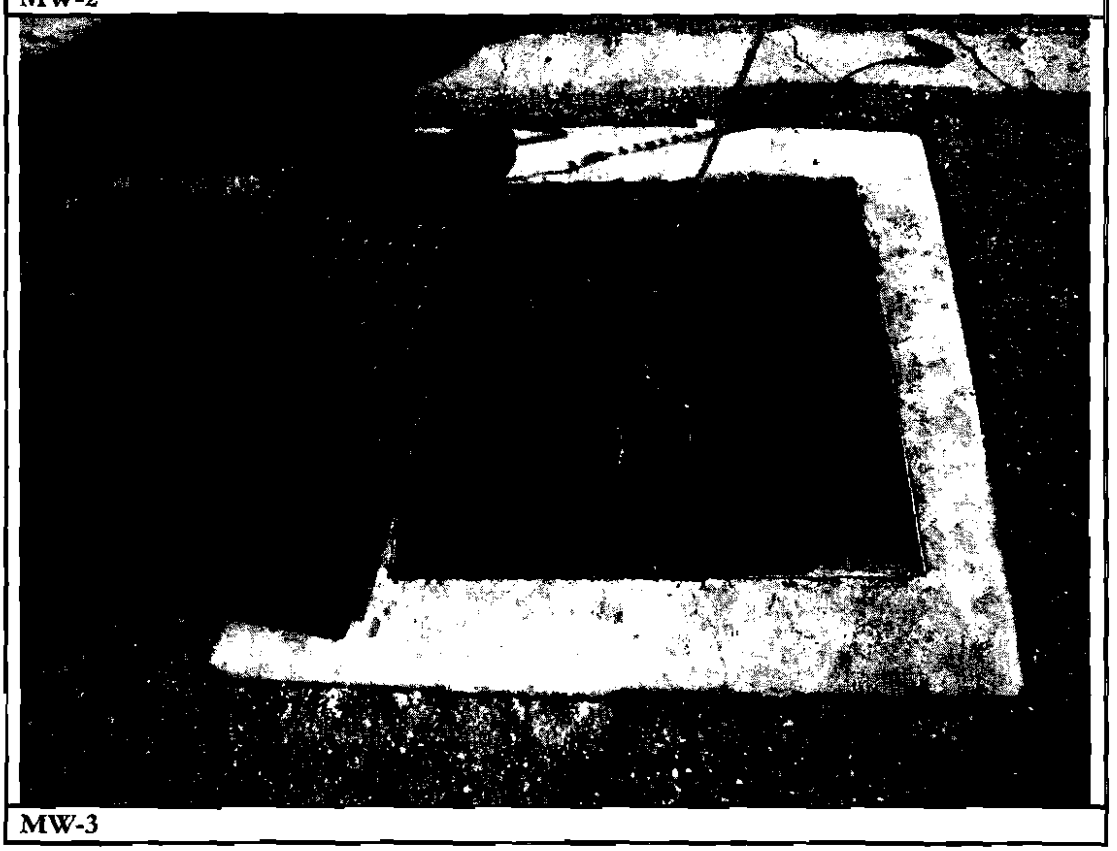
Gannett Fleming, 2009. Interim Remedial Action Plan, Lynwood Springs Redevelopment Project Area, Lynwood, California. October 16.

APPENDIX A

LNAPL Extraction Well Photographs



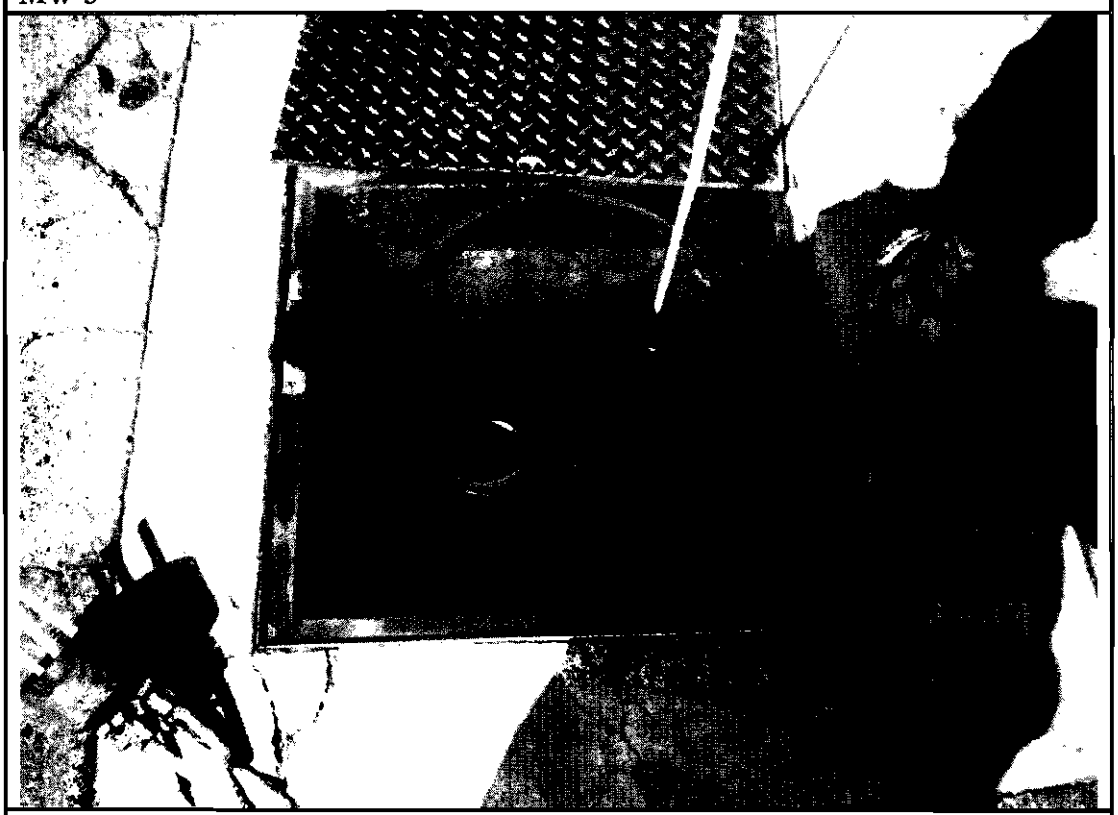
MW-2



MW-3

Photograph not available. Monitoring well has been paved over.

MW-5



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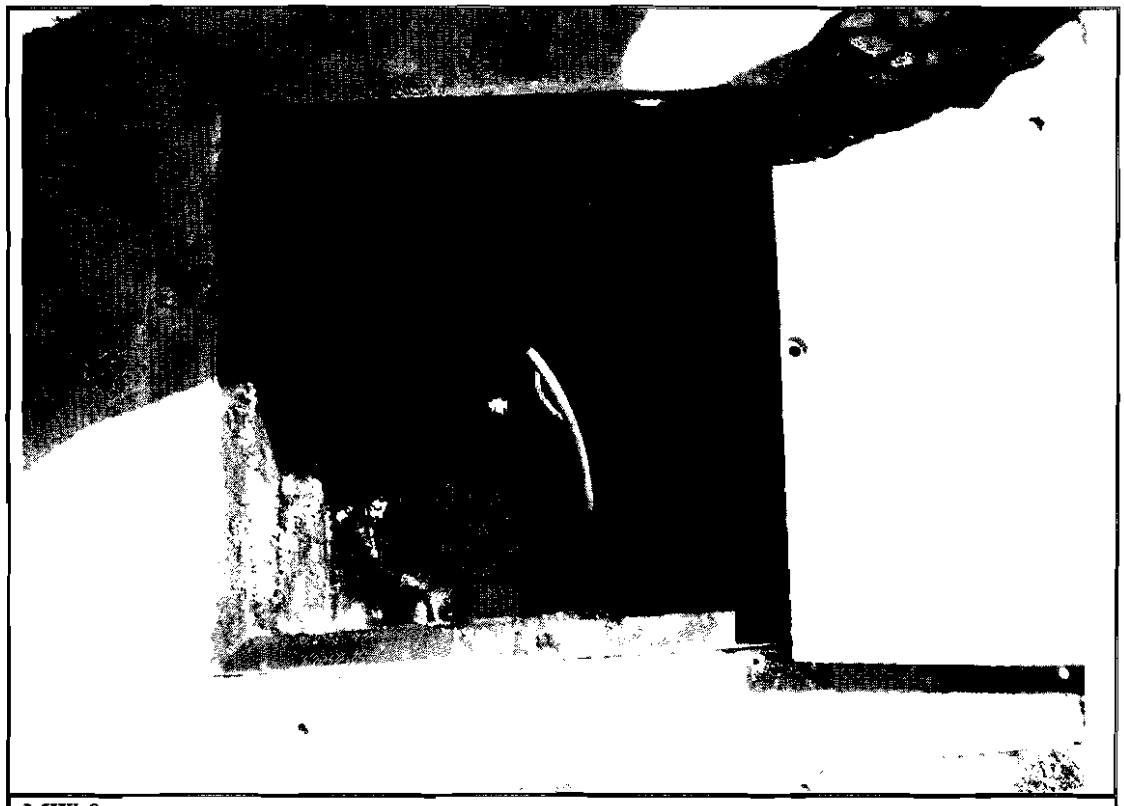

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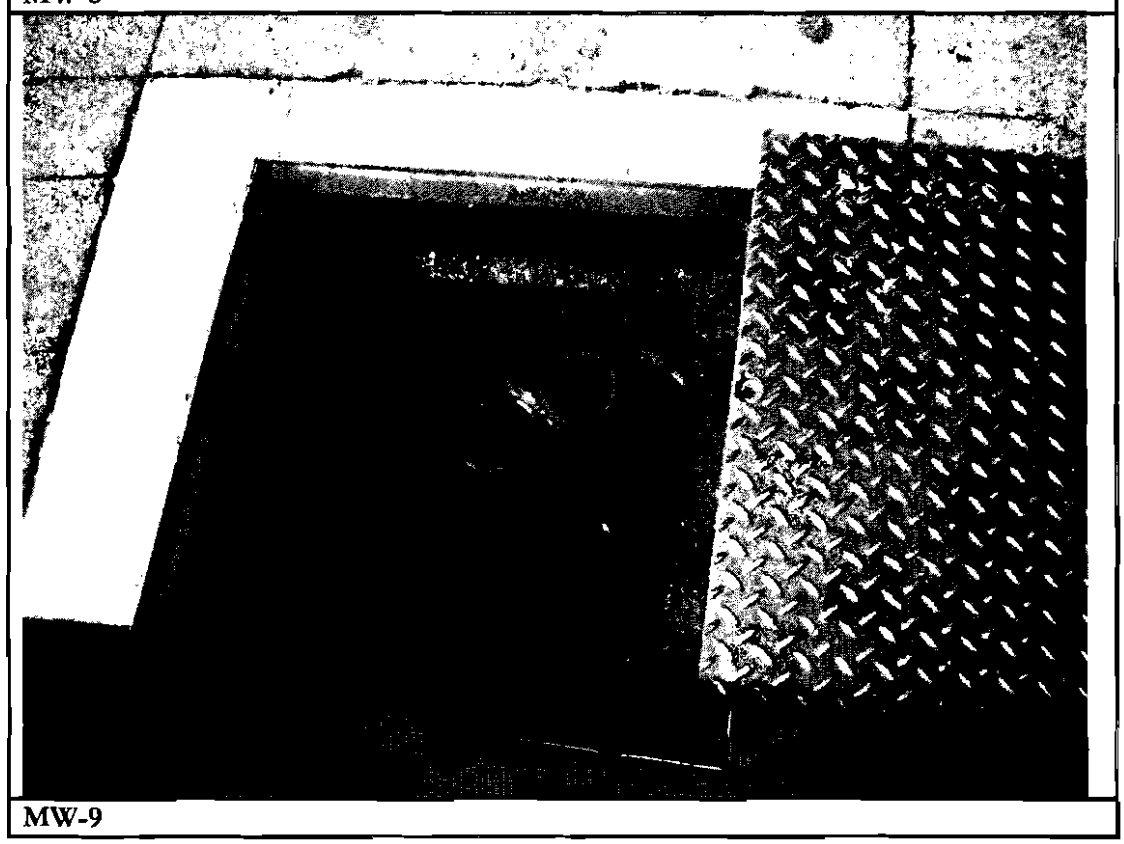

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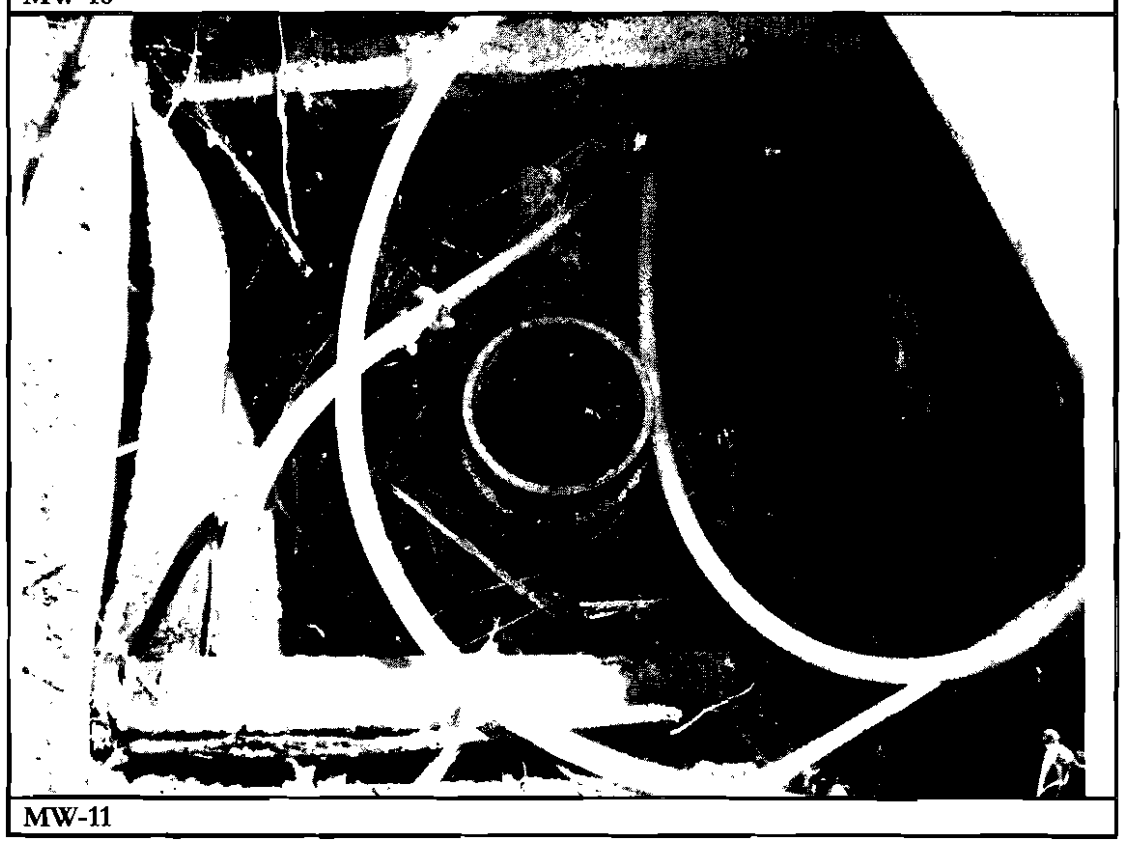
MW-10



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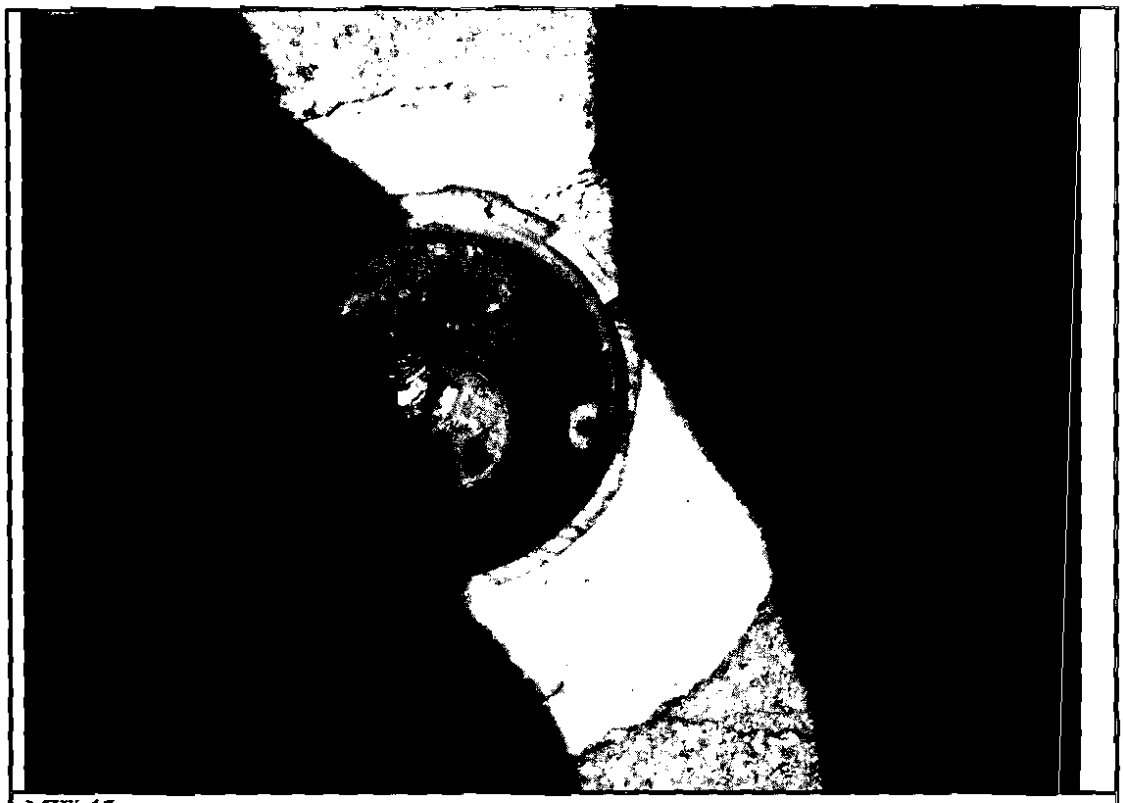
MW-12

Photograph not available.

MW-14



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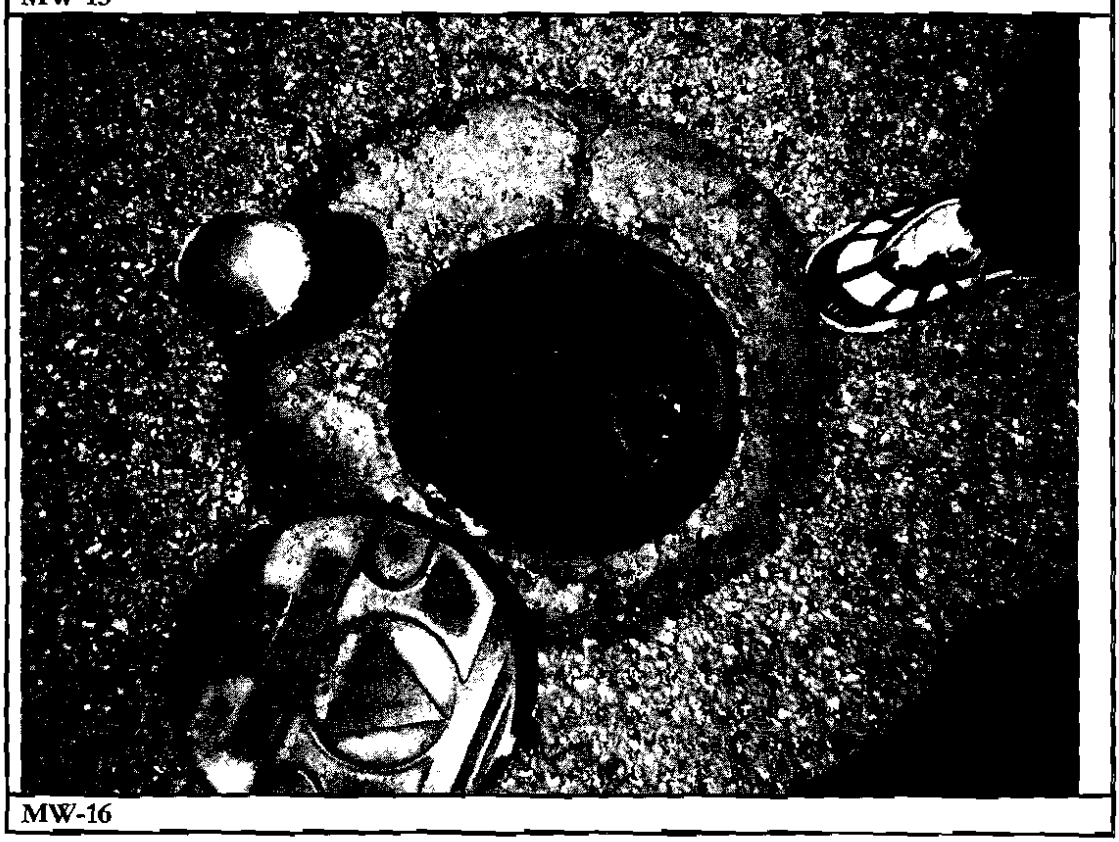
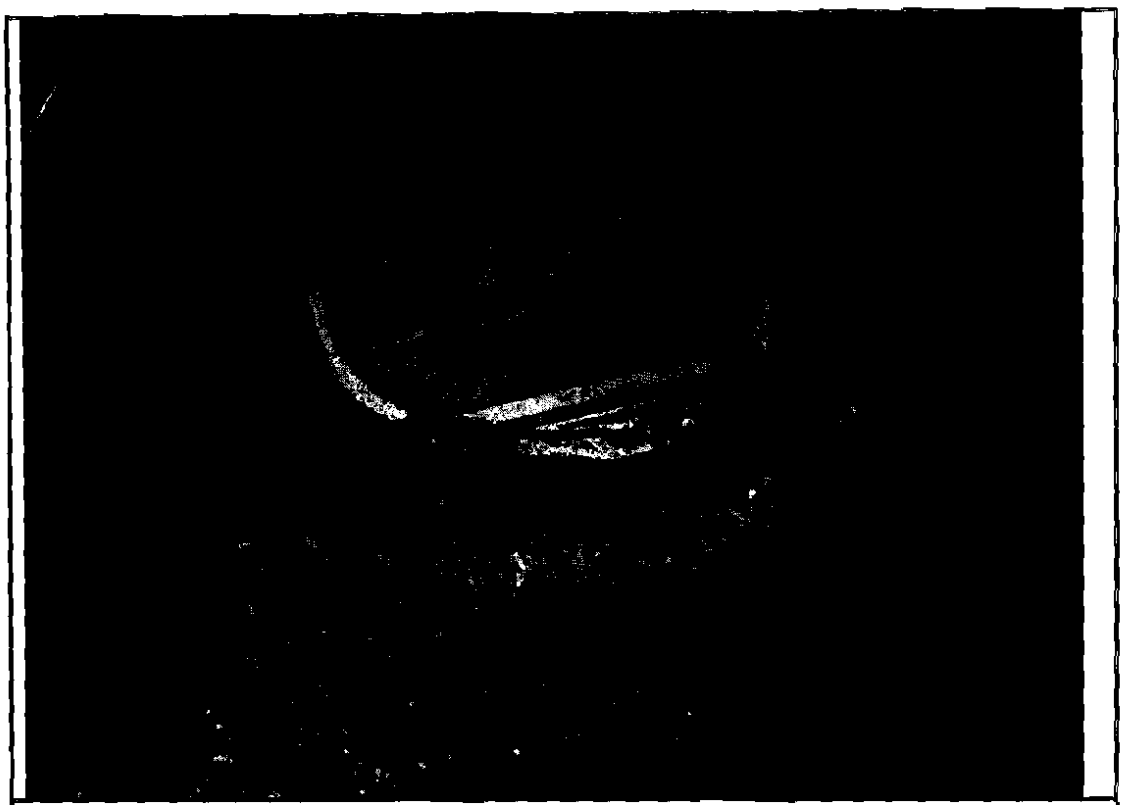


MW-16

MW-21

MW-22



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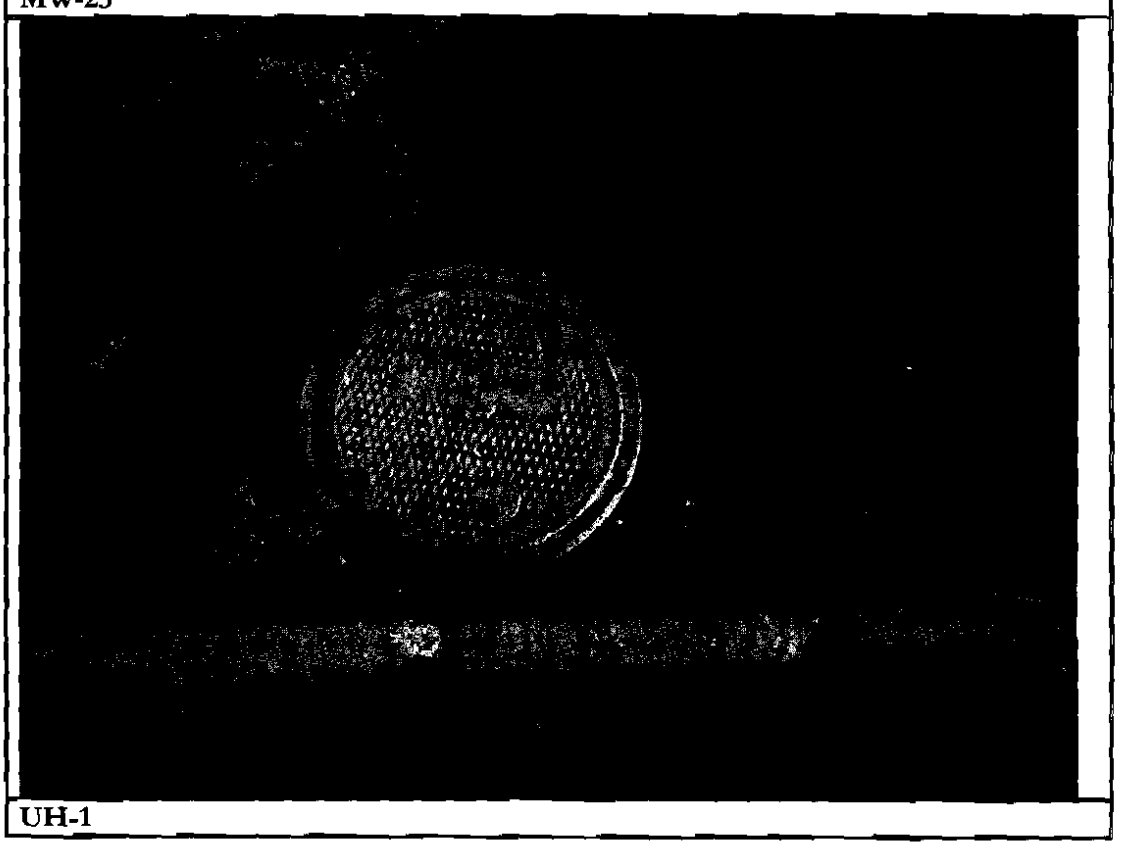

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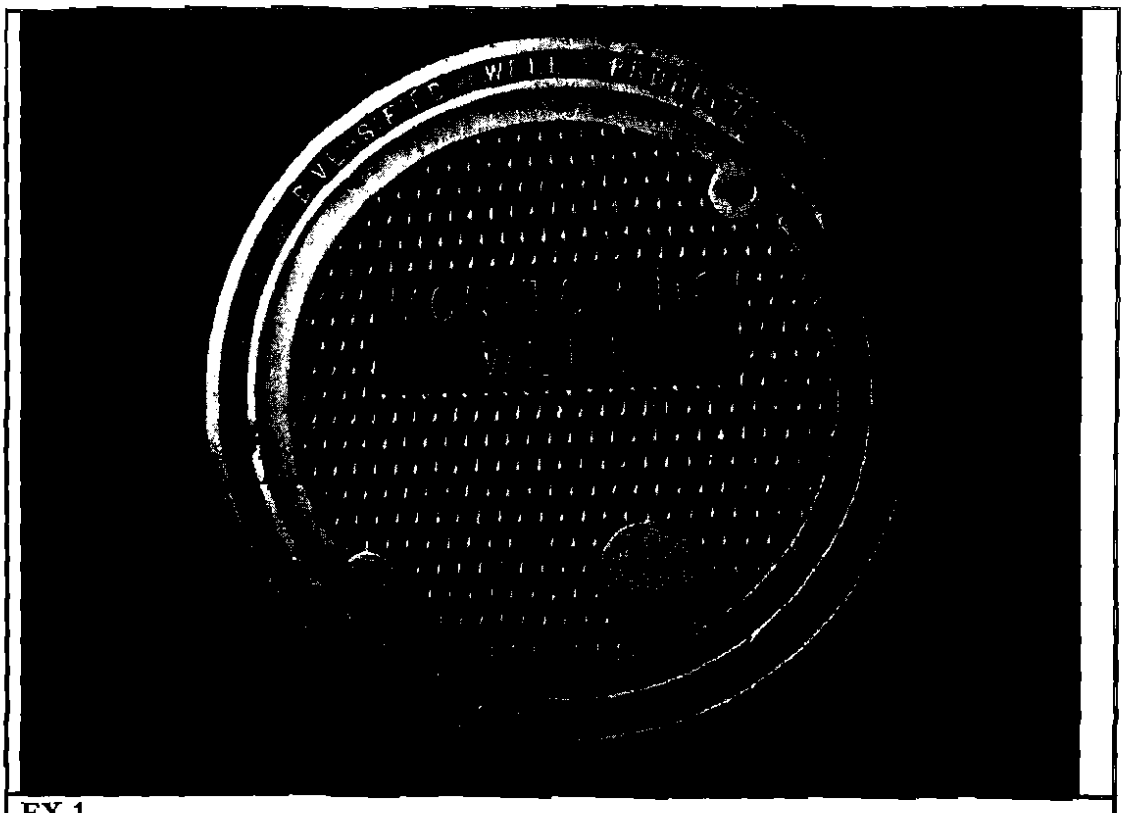

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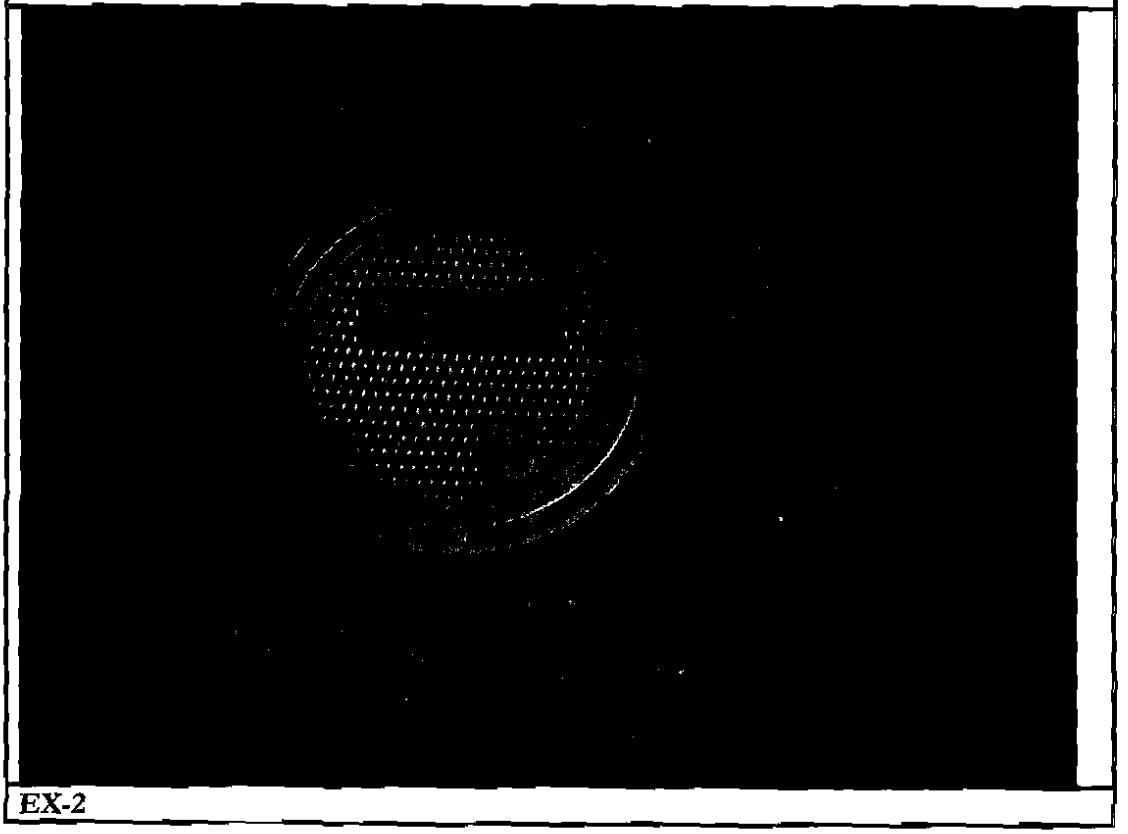

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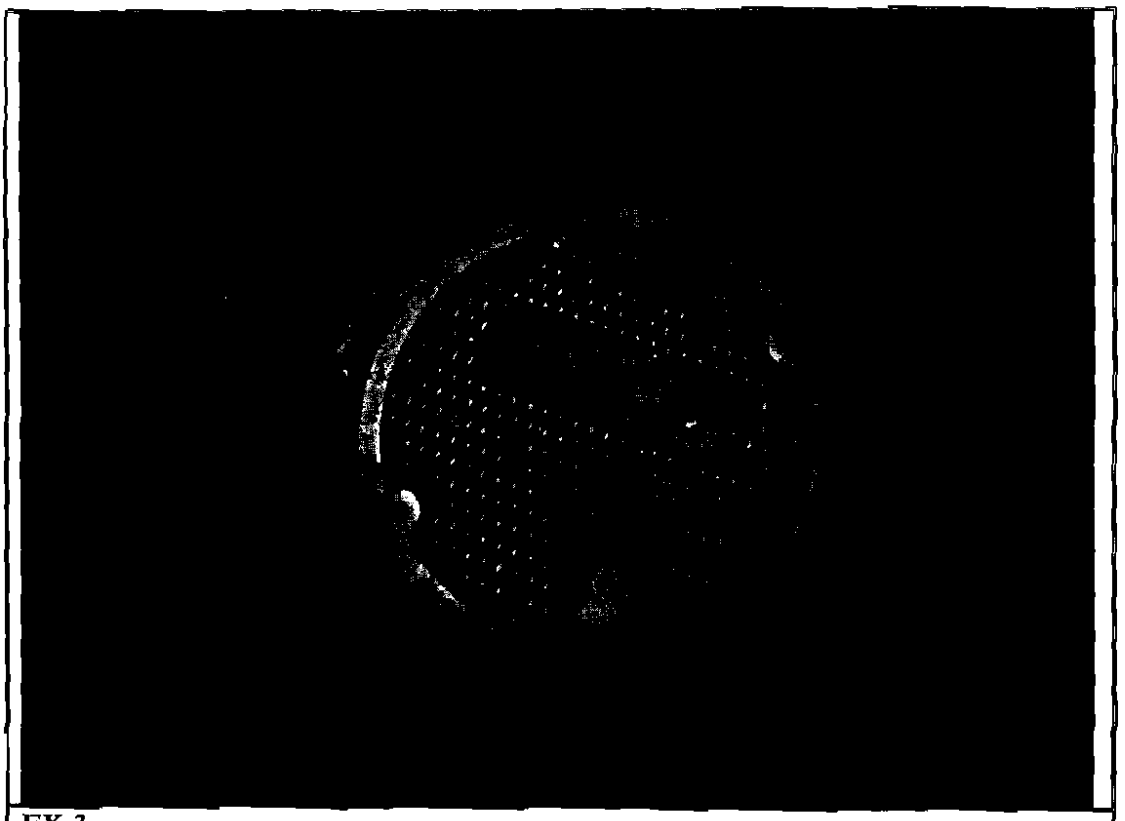


EX-3

APPENDIX B

Well Construction Details

Appendix B
Well Construction Details
Northgate Markets Redevelopment
Lynwood, California

Well Number	Diameter	Casing material	Screen interval (ft bgs)	Elevation (ft amsl)	Well Depth (ft bgs)	Comments
1	4	PVC	15-45	85.21	57	--
2	4	PVC	15-45	84.94	57	--
3	4	PVC	15-45	85.69	57	--
4	4	PVC	15-45	82.44	45	--
5	4	PVC	15-45	--	45	Paved over
6	4	PVC	15-45	84.27	45	--
7	4	PVC	15-45	85.25	45	--
8	4	PVC	15-45	85.18	45	--
9	4	PVC	15-45	85.88	45	--
10	4	PVC	15-45	85.12	45	--
11	4	PVC	15-45	85.27	45	--
12	4	PVC	15-45	83.73	45	--
13	4	PVC	15-45	85.32	45	--
14	4	PVC	15-45	84.53	45	Crushed Casing
15	4	PVC	15-45	83.49	45	--
16	4	PVC	15-45	83.57	45	--
17	4	PVC	15-45	83.46	45	--
18	4	PVC	15-45	83.97	45	--
19	4	PVC	15-45	84.57	45	--
20	4	PVC	15-45	85.46	45	--
21	4	PVC	15-45	85.18	45	Cracked Casing
22	4	PVC	15-45	84.26	45	
23	4	PVC	15-45	83.36	45	--
24	4	PVC	15-45	83.11	45	--
25	4	PVC	15-45	84.98	45	--
26	4	PVC	15-45	83.87	45	--
27	4	PVC	15-45	83.18	45	--
28	4	PVC	15-45	82.73	45	--
29	4	PVC	15-45	82.67	45	--
30	4	PVC	15-45	--	45	--
31	4	PVC	15-45	84.05	45	--
32	4	PVC	15-45	85.05	45	--
33	4	PVC	15-45	83.48	45	--
34	4	PVC	15-45	83.62	45	--
35	--	PVC	15-45	84.04	45	--
W&A MW-1	--	PVC	--	84.47	--	--
W&A MW-2	--	PVC	--	82.36	--	--
W&A MW-3	2	PVC	--	81.79	--	Bad well box
W&A MW-4	--	PVC	--	82.44	--	--
UH-1	2	PVC	14.5-39.5	85.49	42	--
UH-2	2	PVC	14.0-34.0	84.09	40	--
UH-3	2	PVC	14.0-39.0	85.12	40	--
EX-1	4	PVC	--	84.17	--	--
EX-2	4	PVC	--	84.44	--	--
EX-3	4	PVC	--	84.43	--	--

APPENDIX C

Head Loss Calculations

Appendix C - Head Loss Calculation for Existing Remediation Compound - Northgate Markets Project, Lynwood, California

Segment	Length (feet)	Flow (scfm)	Gauge Pressure (in. w.c.)	Diameter (inches)	Velocity (ft/sec)	Head Loss due to Piping (in. w.c.)	Equivalent Length of Pipe for Fittings: Equivalent Length/Diameter (feet/feet)	Equivalent Length of Pipe for Fittings: Equivalent Length (feet)	Head Loss due to Fittings (in. w.c.)	Head Loss Head Loss (in. w.c.)
Vacuum Side:										
MW-2	410	15	-40	2	11.5	3.7	286	47.7	0.4	4.1
MW-3	300	15	-40	2	11.5	2.7	291	48.5	0.44	3.1
MW-5	225	15	-40	2	11.5	2.0	211	35.2	0.32	2.3
MW-7	370	15	-40	2	11.5	3.3	291	48.5	0.44	3.8
MW-8	410	15	-40	2	11.5	3.7	286	47.7	0.4	4.1
MW-9	320	15	-40	2	11.5	2.9	241	40.2	0.4	3.2
MW-10	205	15	-40	2	11.5	1.8	251	41.8	0.4	2.2
MW-11	190	15	-40	2	11.5	1.7	241	40.2	0.4	2.1
MW-14	185	15	-40	2	11.5	1.7	236	39.3	0.4	2.0
MW-22	285	15	-40	2	11.5	2.6	256	42.7	0.4	3.0
						3.7			0.4	4.1
Other Losses										
Wellhead		15	-40	4	2.9	0.0	110	21.7	0.01	0.01
Knock-out Pot	--	--	--	--	--	--	--	--	--	5.0
Air Filter	--	--	--	--	--	--	--	--	--	5.0
Vacuum at Well Head										40
			Total Head Losses on Vacuum Side:			3.7			0.4	54.1
Pressure Side:										
Discharge A	10	150	100	4	28.6	0.015	200	66.7	0.10	0.12
Other Losses										
Heat Exchanger	--	--	--	--	--	--	--	--	--	2.7
			Total Head Losses on Pressure Side:			0.02			0.1	2.8
				Total System Head Losses:		3.7			0.5	56.9

Notes:

Knock-out pot, Air filter, Heat exchanger, and Carbon vessel head losses are estimated.

Pipe segment distances are from the corresponding well to the remediation compound.

Appendix C - Head Loss Calculation for Proposed Remediation Compound - Northgate Markets Project, Lynwood, California

Segment	Length (feet)	Flow (scfm)	Gauge Pressure (in. w.c.)	Diameter (inches)	Velocity (ft/sec)	Head Loss due to Piping (in. w.c.)	Equivalent Length of Pipe for Fittings: Equivalent Length/Diameter (feet/feet)	Equivalent Length of Pipe for Fittings: Equivalent Length (feet)	Head Loss due to Fittings (in. w.c.)	Total Head Loss (in. w.c.)
Vacuum Side:										
MW-12	305	15	-40	2	11.5	2.7	291	48.5	0.4	3.2
MW-15	130	15	-40	2	11.5	1.2	191	31.8	0.3	1.5
MW-16	415	15	-40	2	11.5	3.7	291	48.5	0.44	4.2
MW-21	295	15	-40	2	11.5	2.7	291	48.5	0.44	3.1
MW-23	15	15	-40	2	11.5	0.1	191	31.8	0.29	0.4
UH-1	345	15	-40	2	11.5	3.1	291	48.5	0.4	3.5
EX-1	420	15	-40	2	11.5	3.8	291	48.5	0.44	4.2
EX-2	390	15	-40	2	11.5	3.5	291	48.5	0.44	4.0
EX-3	200	15	-40	2	11.5	1.8	191	31.8	0.3	2.1
						3.8			0.4	4.2
Other Losses										
Wellhead		15	-40	4	2.9	0.0	65	21.7	0.01	0.01
Knockout Tank	--	--	--	--	--	--	--	10	--	5.0
Air Filter	--	--	--	--	--	--	--	--	--	5.0
Vacuum at Well Head										40
			Total Head Losses on Vacuum Side:			3.8			0.4	54.2
Pressure Side:										
Discharge A	10	135	100	4	25.8	0.013	200	66.7	0.1	0.1
Other Losses										
Heat Exchanger	--	--	--	--	--	--	--	--	--	2.7
			Total Head Losses on Pressure Side:			0.01			0.1	2.8
			Total System Head Losses:			3.8			0.5	57.0

Notes:

Knock-out pot, Air filter, Heat exchanger, and Carbon vessel head losses are estimated.

Pipe segment distances are from the corresponding well to the remediation compound.

NORTHGATE MARKETS PROJECT
I-105 / LONG BEACH BOULEVARD
LYNWOOD, CALIFORNIA
DESIGN DRAWINGS

PREPARED FOR: CITY OF LYNWOOD
PROJECT 051051/400
MARCH 24, 2010

SITE VICINITY MAP

DRAWING INDEX

PRELIMINARY
NOT FOR CONSTRUCTION OR PERMIT PURPOSES

GANNETT FLEMING, INC
Consulting Engineers

NO	DESCRIPTION	DATE	BY
2	FINAL 90% SUBMITTAL	3-24-10	CL
1	DRAFT 90% SUBMITTAL	3-18-10	CL

REVISIONS (OR CHANGE NOTICES)

Designed by: Gannett Fleming

Designed for: CITY OF LYNWOOD
11330 BULLIS ROAD
LYNWOOD, CA 90262

TITLE SHEET

NORTHGATE MARKETS PROJECT
I-105 / LONG BEACH BOULEVARD
LYNWOOD, CALIFORNIA

PROJECT NO 051051/400
DESIGNED BY: CL
DRAWN BY: WRI
CHECKED BY:
DATE: MARCH 24, 2010
DPW CHK:
SHEET: 1 OF 10

GENERAL NOTES

THE CONTRACTOR MUST COMPLY WITH ALL APPLICABLE SAFETY PROCEDURES WITH RESPECT TO THE EMPLOYEES OF THE CONTRACTOR AND HIS SUBCONTRACTOR UNDER THE OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) AND REGULATIONS ISSUED THEREUNDER AND STATE LABOR (SAFETY) DEPARTMENT RULES, PROCEDURES, AND REGULATIONS REGARDING SAFETY.

UNDERGROUND PIPING AND UTILITIES SHALL BE LOCATED AND DE-ENERGIZED AS NECESSARY PRIOR TO COMMENCING EXCAVATION WORK

ABBREVIATIONS

AOC	AREA OF CONTAMINATION	NA	NOT APPLICABLE
℄	CENTER LINE	NTS	NOT TO SCALE
CONC	CONCRETE	OC	ON CENTER
CMP	CORRUGATED METAL PIPE	℗	PROPERTY LINE
D & D	DEMOLITION & DECONDITIONING	PP	POWER POLE
DIA OR Ø	DIAMETER	PVC	POLYVINYL CHLORIDE
E	EASTING	SAN	SANITARY SEWER
ELEC	ELECTRIC	SHT	SHEET
ELEV	ELEVATION	SSO	SANITARY SEWER-CONCRETE
EXIST	EXISTING	SF	SQUARE FEET
FL	FLOW LINE	TYP	TYPICAL
HDPE	HIGH DENSITY POLYETHYLENE	UG	UNDERGROUND
INV	INVERT	UST	UNDERGROUND STORAGE TANK
IW	IRRIGATION WATER	VOC	VOLATILE ORGANIC COMPOUNDS
LF	LINEAR FOOT	W	WATER
MH	MANHOLE	WDA	WATER DRAIN-STAINLESS STEEL
MIN	MINIMUM	WL	WATER LEVEL
MW	MONITORING WELL	N	NORTHING
MTL	METAL		

SECTION AND DETAIL SYMBOL

LINETYPE LEGEND

	EXISTING C & G
—SAS—	EXISTING SANITARY SEWER
—W—	EXISTING WATER LINE
—G—	EXISTING GAS LINE
—SD—	EXISTING STORM DRAIN
—UT—	EXISTING UNDERGROUND TELEPHONE LINE
—UE—	EXISTING UNDERGROUND ELECTRICAL LINE
—CATV—	EXISTING UNDERGROUND CABLE TV LINE
—TC—	EXISTING TRAFFIC SIGNAL CONDUIT
	EXISTING TELEPHONE BOX
SD	EXISTING STORM DRAIN MANHOLE
MH	EXISTING SANITARY SEWER MANHOLE
	EXISTING WATER VALVE
WM	EXISTING WATER METER
GV	EXISTING GAS VALVE
GM	EXISTING GAS METER
	EXISTING FIRE HYDRANT
PP	POWER POLE
SP	PEDESTAL SIGNAL
PB	PULL BOX
	LIGHT POLE
	EXISTING STORM INLET
	PROJECT BOUNDARY
	TRENCH FOR REMEDIATION SYSTEM

LINE IDENTIFICATION

HD	HOT DRAIN
WD	WARM DRAIN
SW	SERVICE WASTE (COLD DRAIN)
SS	SANITARY SEWER

DRAWING LEGEND

BUILDING STRUCTURE

SECTION

NATIVE SOIL

CLEAN NATIVE AND/OR BORROWED BACKFILL MATERIAL 90% MIN COMPACTION ASTM

SAND

PLAN VIEW

GROUNDWATER MONITORING WELL

VAPOR EXTRACTION WELL

PRELIMINARY
NOT FOR CONSTRUCTION OR PERMIT PURPOSES

GANNETT FLEMING, INC
Consulting Engineers

NO	DESCRIPTION	DATE	BY
7			
6			
5			
4			
3			
2	FINAL 90% SUBMITTAL	3-24-10	CL
1	DRAFT 80% SUBMITTAL	3-18-10	CL

REVISIONS (OR CHANGE NOTICES)

Designed by: Gannett Fleming

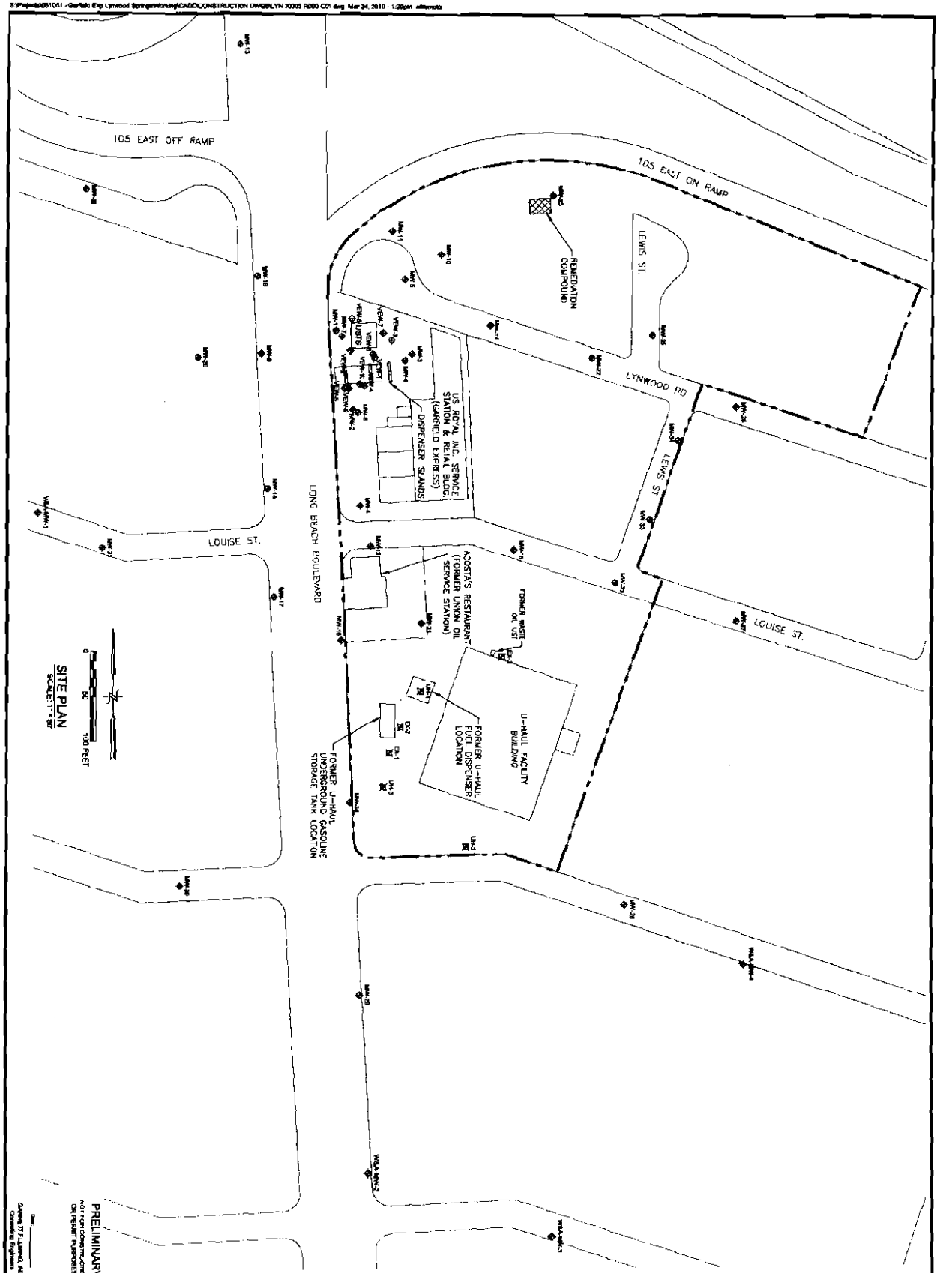
Designed for: CITY OF LYNWOOD
11330 BULLIS ROAD
LYNWOOD, CA 90262

GENERAL NOTES, SYMBOLS, AND ABBREVIATIONS

NORTHGATE MARKETS PROJECT
I-105 / LONG BEACH BOULEVARD
LYNWOOD, CALIFORNIA

PROJECT NO	051051400
DESIGNED BY	CL
DRAWN BY	WRI
CHECKED BY	
DATE:	MARCH 24, 2010
DPW CHK:	

SHEET: 2 OF 10



PRELIMINARY
NOT FOR CONSTRUCTION OR PERMIT PURPOSES

GANNETT FLEMING, INC.
Consulting Engineers

SITE PLAN

NORTHGATE MARKETS PROJECT
I-105 / LONG BEACH BOULEVARD
LYNWOOD, CALIFORNIA

Designed By: Gannett Fleming

Designed For:
CITY OF LYNWOOD
11330 BULLIS ROAD
LYNWOOD, CA 90262

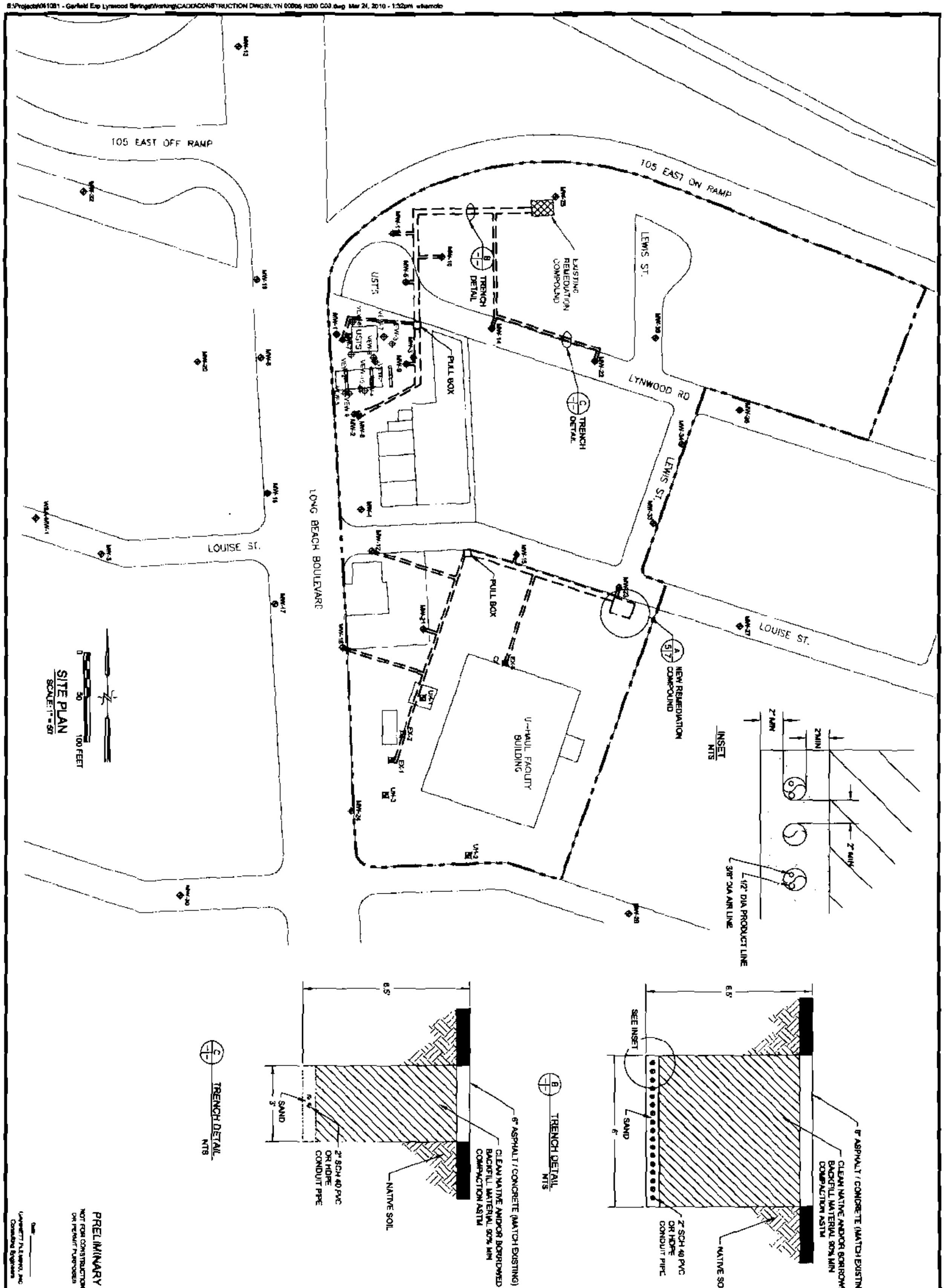
NO.	DESCRIPTION	DATE	BY
7			
6			
5			
4			
3			
2	FINAL 80% SUBMITTAL	3-24-10	CL
1	DRAFT 80% SUBMITTAL	3-16-10	CL

REVISIONS (OR CHANGE NOTICES)

PROJECT NO. 06-105-H09
DESIGNED BY: CL
DRAWN BY: WRI
CHECKED BY:
DATE: MARCH 24, 2010
DRW CHK:

SHEET: 3 OF 10

WELL LAYOUT PLAN
NORTHGATE MARKETS PROJECT
I-105 / LONG BEACH BOULEVARD
LYNWOOD, CALIFORNIA
CITY OF LYNWOOD
11330 BULLIS ROAD
LYNWOOD, CA 90262
REVISIONS (OR CHANGE NOTICES)
NO. DESCRIPTION DATE BY
1 DRAFT 80% SUBMITTAL 3-18-10 CL
2 FINAL 80% SUBMITTAL 3-24-10 CL
PROJECT NO. 0510514GD
DESIGNED BY: CL
DRAWN BY: WRI
CHECKED BY:
DATE: MARCH 24, 2010
DPW CHK:
SHEET: 4 OF 10
PRELIMINARY
NOT FOR CONSTRUCTION OR PERMIT PURPOSES
GARRETT FLEMING INC.
Civil Engineering Engineers
NOTE:
* DUNN AND BOYNTON
DATE OF SURVEY 13 JUN 06
VERTICAL DATUM NAVD88
LOS ANGELES COUNTY BM #Y 1077 17 LACO BM TAG IN S CB 1 IN E/O BOR AT SE COR LONG BEACH BLVD AND IMPERIAL HWY 26IN E AND 11.8 IN S/O C/L HIT.
2000 ELEV=88.197 FEET NAVD88.
HORIZONTAL DATUM NAD83
NGS PID STATIONS AA4190 AND AJ1947 EPOCH DATE 2000.35
Point Table
Point Table
SITE PLAN
SCALE: 1" = 50'
0 50 100 FEET
LOUISE ST
LONG BEACH BOULEVARD
LEWIS ST.
LYNWOOD RD
LEWIS ST
TOE EAST ON RAMP
OS EAST OFF RAMP
REMEDIATION COMPOUND
J-HAUL FACILITY BUILDING
FORMER U-HAUL FUEL DISPENSER LOCATION
FORMER U-HAUL UNDERGROUND GASOLINE STORAGE TANK LOCATION
FORMER WASTE OIL UST
ACOSTA'S RESTAURANT (FORMER UNION OIL SERVICE STATION)
US ROYAL INC. SERVICE STATION & RETAIL BLDG. (CARFIELD EXPRESS)
DISPENSER ISLANDS
USTS
WELL DETAIL
A/B 4/6



NO	DESCRIPTION	DATE	BY
7			
6			
5			
4			
3			
2	FINAL 80% SUBMITTAL	3-24-10	CL
1	DRAFT 80% SUBMITTAL	3-18-10	CL

REVISIONS (OR CHANGE NOTICES)

Designed by: Gannett Fleming

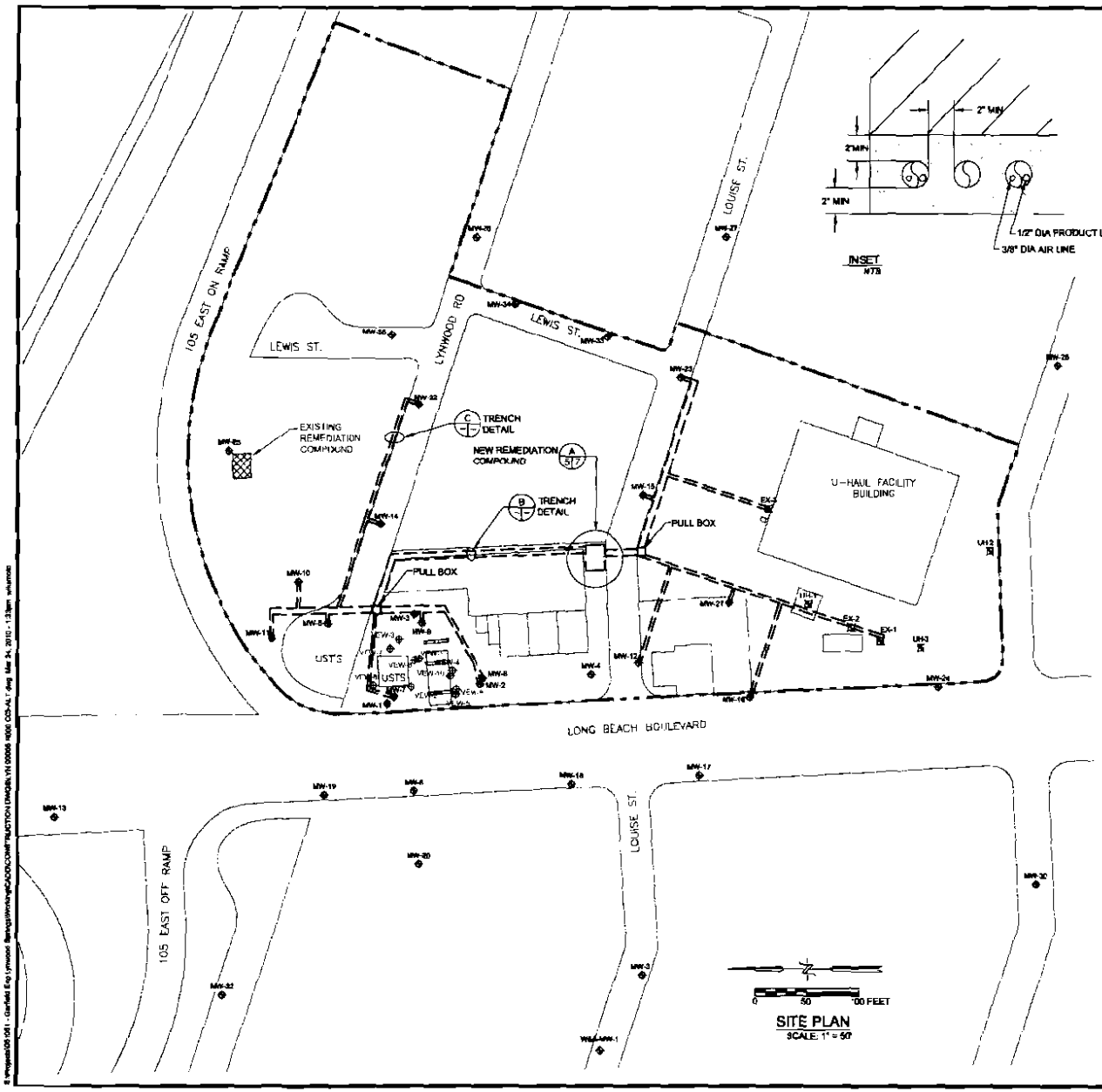
Designed For: CITY OF LYNWOOD
11330 BULLIS ROAD
LYNWOOD, CA 90262

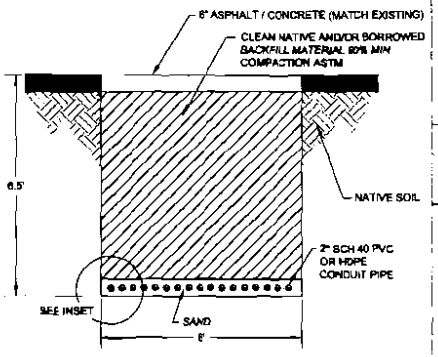
TRENCH AND PIPING PLAN

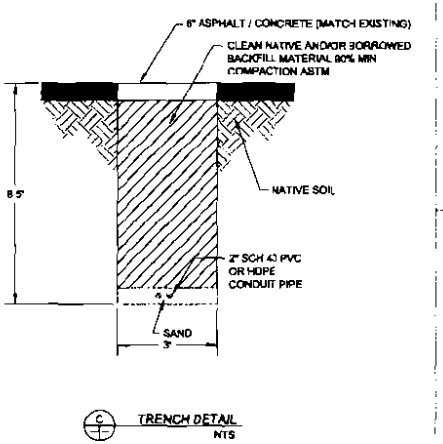
NORTHGATE MARKETS PROJECT
I-105 / LONG BEACH BOULEVARD
LYNWOOD, CALIFORNIA

PROJECT NO.	051051/400
DESIGNED BY:	CL
DRAWN BY:	WRI
CHECKED BY:	
DATE:	MARCH 24, 2010
DPW CHK:	

SHEET: 5 OF 10







PRELIMINARY
NOT FOR CONSTRUCTION OR PERMIT PURPOSES

Date _____

GANNETT FLEMING, INC.
Consulting Engineers

NO	DESCRIPTION	DATE	BY
1	DRAFT 90% SUBMITTAL	3-18-10	CL
2	FINAL 90% SUBMITTAL	3-24-10	CL
3			
4			
5			
6			
7			

REVISIONS (OR CHANGE NOTICES)

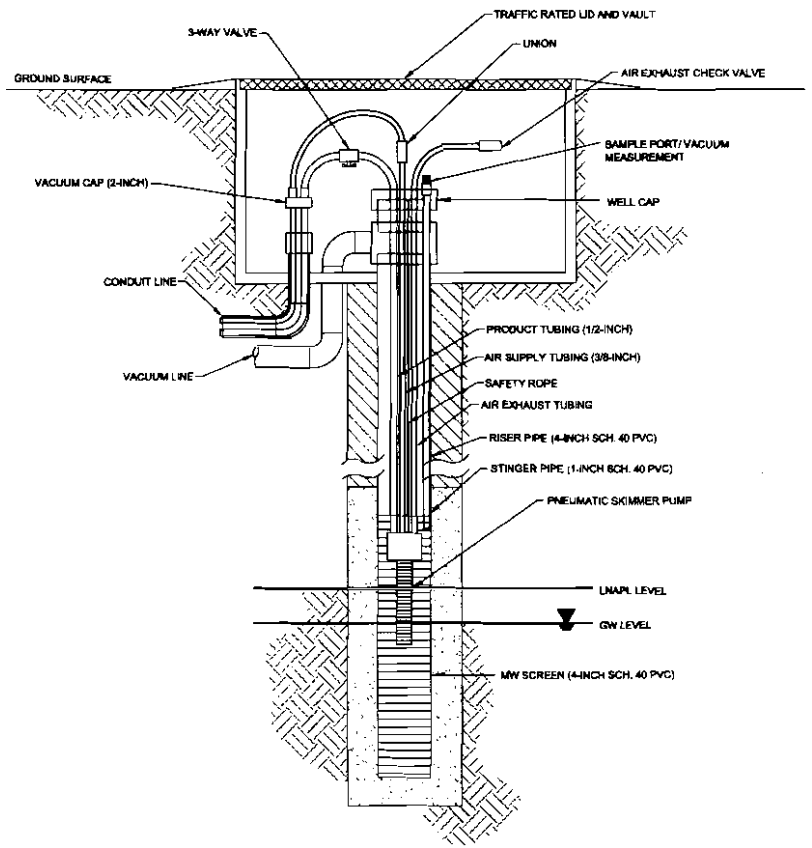
Gannett Fleming

Prepared for: CITY OF LYNWOOD
11330 BULLIS ROAD
LYNWOOD, CA 90262

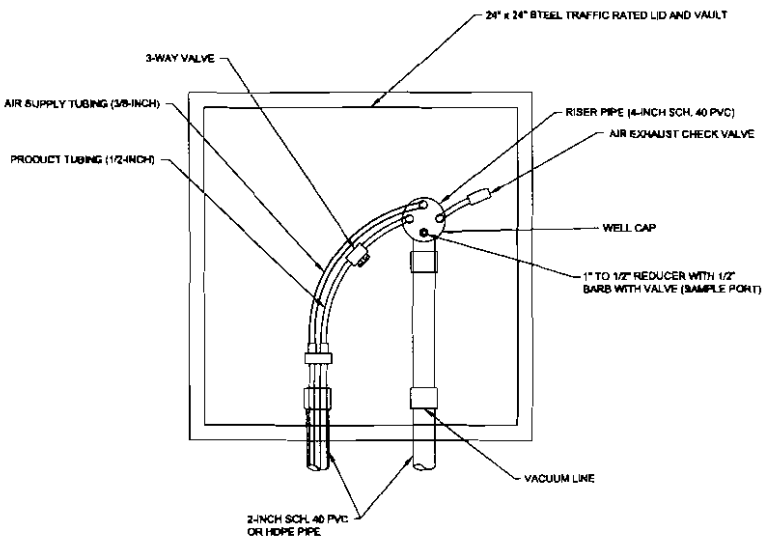
TRENCH AND PIPING PLAN

NORTHGATE MARKETS PROJECT
I-105 / LONG BEACH BOULEVARD
LYNWOOD, CALIFORNIA

PROJECT NO	051061400
DESIGNED BY:	CL
DRAWN BY:	WRI
CHECKED BY:	
DATE:	MARCH 24, 2010
DPW CHK:	
SHEET:	ALT 5 OF 10



A/4/6 TYPICAL LNAPL RECOVERY WELL DETAIL
NTS



B/4/5 LNAPL RECOVERY WELL VAULT DETAIL
NTS

PRELIMINARY
NOT FOR CONSTRUCTION OR PERMIT PURPOSES

Date _____
GANNETT FLEMING, INC.
Consulting Engineers

NO.	DESCRIPTION	DATE	BY
1	DRAFT 90% SUBMITTAL	3-18-10	CL
2	FINAL 90% SUBMITTAL	3-24-10	CL
3			
4			
5			
6			
7			

REVISIONS (OR CHANGE NOTICES)

Designed By: Gannett Fleming

Prepared For: CITY OF LYNWOOD
11330 BULLIS ROAD
LYNWOOD, CA 90262

SECTIONS AND DETAILS

NORTHGATE MARKETS PROJECT
I-105 / LONG BEACH BOULEVARD
LYNWOOD, CALIFORNIA

PROJECT NO.	051051/400
DESIGNED BY:	CL
DRAWN BY:	WRI
CHECKED BY:	
DATE:	MARCH 24, 2010
DPW CHK:	

SHEET:
6 OF 10

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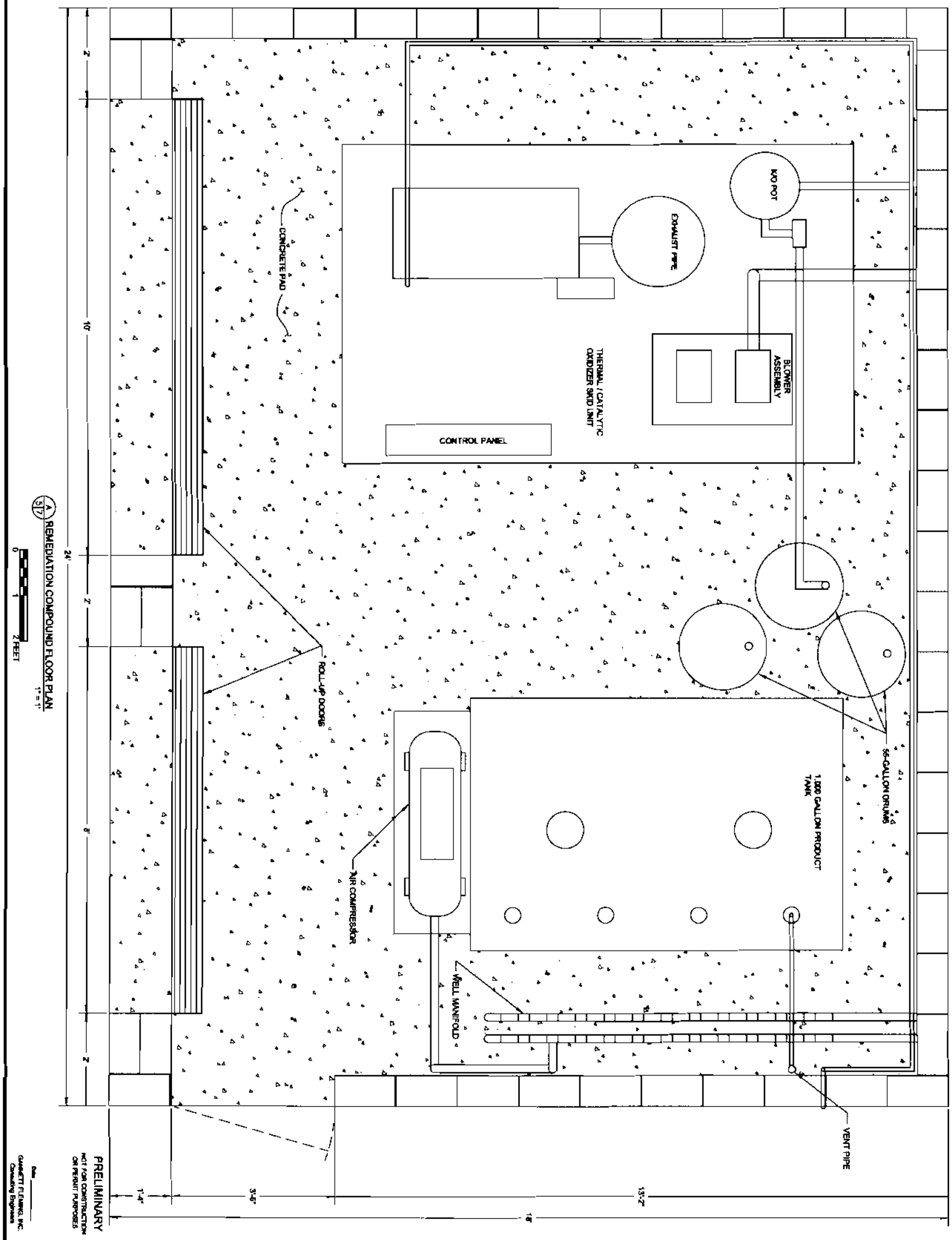


PROJECT NO. 051051400
DESIGNED BY: CL
DRAWN BY: WRI
CHECKED BY:
DATE: MARCH 24, 2010
DPW CHK:
SHEET: 7 OF 10

REMEDIATION COMPOUND FLOOR PLAN

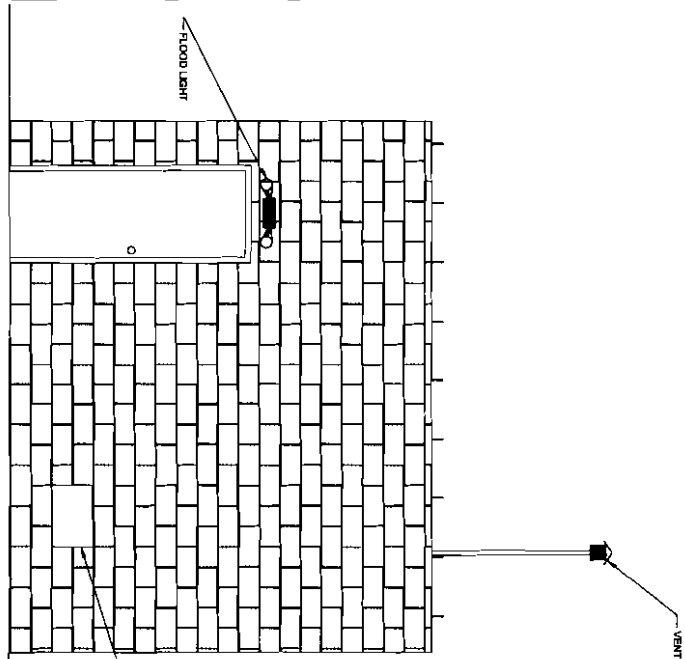
NORTHGATE MARKETS PROJECT
I-105 / LONG BEACH BOULEVARD
LYNWOOD, CALIFORNIA

Designed for: Gannett Fleming

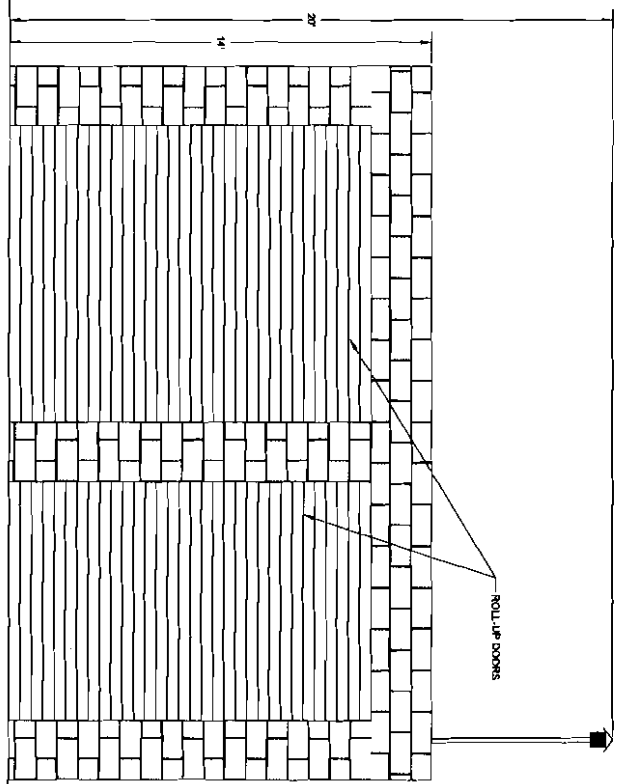
Designed for: CITY OF LYNWOOD
11330 BULLIS ROAD
LYNWOOD, CA 90262

NO.	DESCRIPTION	DATE	BY
7			
6			
5			
4			
3			
2	FINAL 80% SUBMITTAL	3-24-10	CL
1	DRAFT 80% SUBMITTAL	3-18-10	CL

REVISIONS (OR CHANGE NOTICES)



RIGHT SIDE ELEVATION
REMEDIATION COMPOUND
1" = 3'



FRONT ELEVATION
REMEDIATION COMPOUND
1" = 3'

PRELIMINARY
NOT FOR CONSTRUCTION OR PERMIT PURPOSES

GANNETT FLEMING, INC
Consulting Engineers

REMEDIATION COMPOUND ELEVATIONS AND DETAILS

NORTHGATE MARKETS PROJECT
I-105 / LONG BEACH BOULEVARD
LYNWOOD, CALIFORNIA

Designed by: Gannett Fleming

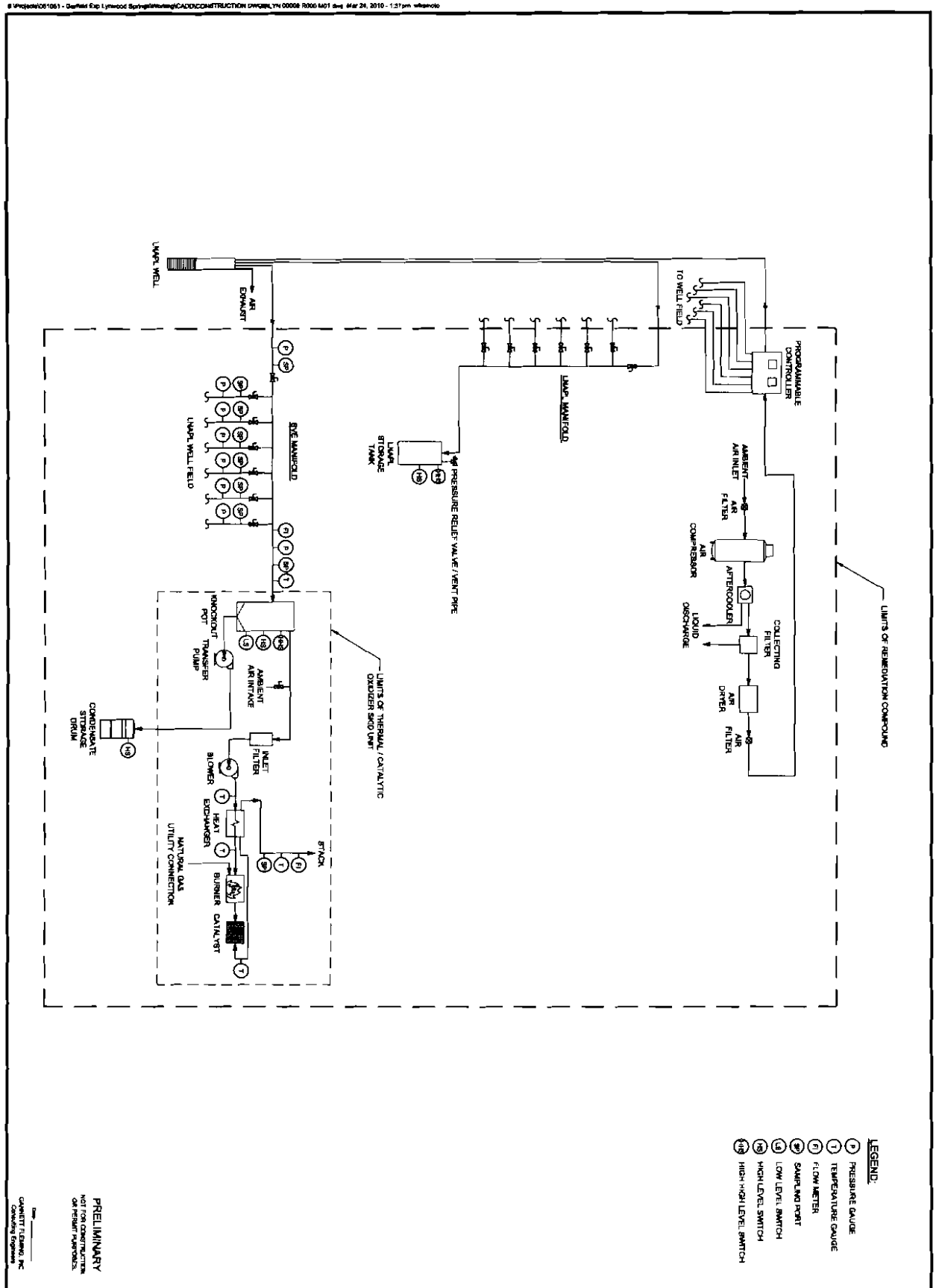
Designed for: CITY OF LYNWOOD
11330 BULLIS ROAD
LYNWOOD, CA 90262

NO.	DESCRIPTION	DATE	BY
7			
6			
5			
4			
3			
2	FINAL 60% SUBMITTAL	3-24-10	CL
1	DRAFT 80% SUBMITTAL	3-18-10	CL

REVISIONS (OR CHANGE NOTICES)

PROJECT NO. 051051400
DESIGNED BY: CL
DRAWN BY: WRI
CHECKED BY:
DPW CHK.
DATE: MARCH 24, 2010

SHEET: 8 OF 10



LEGEND:

- PRESSURE GAUGE
- TEMPERATURE GAUGE
- FLOW METER
- SAMPLING PORT
- LOW LEVEL SWITCH
- HIGH LEVEL SWITCH
- HIGH HIGH LEVEL SWITCH

PRELIMINARY
NOT FOR CONSTRUCTION OR PERMIT PURPOSES

Date _____
GANNETT FLEMING, INC
Consulting Engineers

LNAPL RECOVERY SYSTEM P & ID

NORTHGATE MARKETS PROJECT
I-105 / LONG BEACH BOULEVARD
LYNWOOD, CALIFORNIA

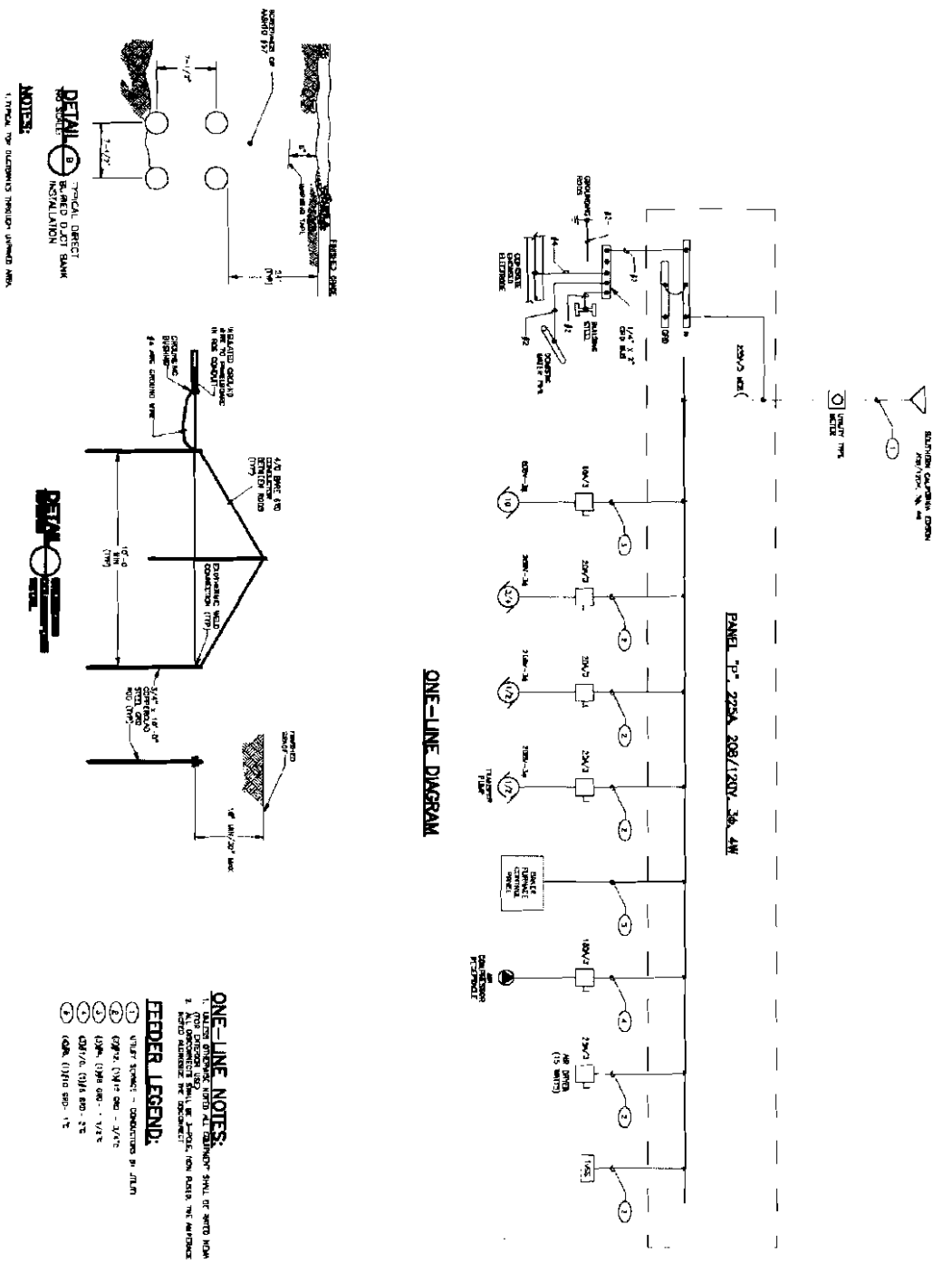
Designed for:
CITY OF LYNWOOD
11330 BULLIS ROAD
LYNWOOD, CA 90262

NO.	DESCRIPTION	DATE	BY
7			
6			
5			
4			
3			
2	FINAL 80% SUBMITTAL	3-24-10	CL
1	DRAFT 80% SUBMITTAL	3-18-10	CL

REVISIONS (OR CHANGE NOTICES)

PROJECT NO: 05105.1400
DESIGNED BY: CL
DRAWN BY: WBI
CHECKED BY:
DATE: MARCH 24, 2010
DPW CHK:

SHEET: 9 OF 10



PRELIMINARY
NOT FOR CONSTRUCTION OR PERMIT PURPOSES

GANNETT FLEMING, INC.
Consulting Engineers

PROJECT NO.	051061400		
DESIGNED BY	CL		
DRAWN BY	WRI		
CHECKED BY			
DATE	MARCH 24, 2010		
DRW CHK			

SHEET: 10 OF 10

ELECTRICAL ONE-LINE DIAGRAM

NORTHGATE MARKETS PROJECT
I-105 / LONG BEACH BOULEVARD
LYNWOOD, CALIFORNIA

Designed By: Gannett Fleming

Designed For: CITY OF LYNWOOD
11330 BULLIS ROAD
LYNWOOD, CA 90262

NO	DESCRIPTION	DATE	BY
7			
6			
5			
4			
3			
2	FINAL 80% SUBMITTAL	3-24-10	CL
1	DRAFT 80% SUBMITTAL	3-18-10	CL

REVISIONS (OR CHANGE NOTICES)